



## DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO

GOVERNOR

MIKE D. McDANIEL, Ph.D.

SECRETARY

Certified Mail No.

Agency Interest No. 1136  
Activity No.: PER20050033

Mr. Steve A. Rathweg  
Plant Manager  
Shell Chemical LP  
P. O. Box 500  
Geismar, Louisiana 70734

RE: Part 70 Operating Permit Modification and Renewal, EOEG-2 Unit, Geismar Plant, Shell Chemical LP, Geismar, Ascension Parish, Louisiana

Dear Mr. Rathweg:

This is to inform you that the permit modification for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the \_\_\_\_\_ of \_\_\_\_\_, 2011, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and Agency Interest No. cited above should be referenced in future correspondence regarding this facility.

Done this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

Permit No.: 2057-V3

Sincerely,

Chuck Carr Brown, Ph. D.  
Assistant Secretary

SGQ  
cc: EPA Region VI

**ENVIRONMENTAL SERVICES**  
PO BOX 4313, BATON ROUGE, LA 70821-4313  
P:225-219-3181 F:225-219-3309  
[WWW.DEQ.LOUISIANA.GOV](http://WWW.DEQ.LOUISIANA.GOV)

**PUBLIC NOTICE**  
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)**  
**SHELL CHEMICAL LP / GEISMAR PLANT - ETHYLENE OXIDE/ETHYLENE GLYCOL-2 UNIT**  
**PROPOSED PART 70 AIR OPERATING PERMIT MODIFICATION & RENEWAL**

The LDEQ, Office of Environmental Services, is accepting written comments on a Part 70 Air Operating Permit (Modification & Renewal) for Shell Chemical LP, Geismar Plant P. O. Box 500 Geismar, Louisiana 70734 for the Ethylene Oxide/Ethylene Glycol (EOEG)-2 Unit. The facility is located at 7594 Hwy 75 in Geismar, Ascension Parish.

Shell Chemical, LP requested to modify the existing EOEG-2 Unit to maintain and increase quantity of High Purity Ethylene Oxide (HPEO) production by incorporating HPEO-1 Project as the EOEG-1 Unit is scheduled to be dismantled. This project will affect the EOEG-3 Unit, Utilities Unit, Logistics Unit, M-Unit, PDO-1 and will utilize some of the equipment from the EOEG-1 Unit. The modification involves the following: 1) Re-tray the EO-1 Purification Column and replace the Overhead Subcooler of the column along with the associated piping and fugitive components to deliver material to and from the EOEG-3 Unit; 2) Replace an existing vent absorber, EO-1 300; 3) Modify Brine Chilling System; 4) Install a new EG-2 Bleeds Cooler and associated piping and fugitive components; 5) Modify EOEG-2 existing pipeline to HPEO pipeline chiller; 6) Modify EG-3 Reactor Feed System; 7) Install a new EG-3 Bleed Cooler, associated piping and fugitive components along with transfer line to EG-2. The unit currently operates under Permit No. 2057-V2 dated June 29, 2004.

The HPEO-1 project actual emissions increase is estimated in tons per year as follows:

Pollutant	Project Emissions Increase	PSD/NNSR Significance Levels	Netting Analysis Required
PM <sub>10</sub>	0.75	15	No
SO <sub>2</sub>	0.01	40	No
NO <sub>x</sub>	13.20	40/25	No
CO	11.22	100	No
VOC	18.26	40/25	No

The increase in emissions due to the HPEO-1 Project do not exceed the Prevention of Significant Deterioration (PSD) significance threshold, therefore, this project does not require netting or PSD review. Similarly, the increase in emissions due to this project do not exceed the Nonattainment New Source Review (NNSR) significance threshold, therefore, NNSR is not required.

Permitted emissions from the EOEG-2 Unit in tons per year are as follows:

Pollutant	Before	After	Change
PM <sub>10</sub>	17.17	17.18	+ 0.01
SO <sub>2</sub>	0.19	0.19	+ 0.00
NO <sub>x</sub>	3.89	4.10	+ 0.21
CO	10.73	12.29	+ 1.56
VOC	38.33	47.03	+ 8.70

Written comments, written requests for a public hearing, or written requests for notification of the final decision regarding this permit action may be submitted to Ms. Soumaya Ghosn at LDEQ, Public Participation Group, P.O. Box 4313, Baton Rouge, LA 70821-4313. **Written comments and/or written requests must be received by 12:30 p.m., Thursday, June 8, 2006.** Written comments will be considered prior to a final permit decision.

If LDEQ finds a significant degree of public interest, a public hearing will be held. LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The proposed permit, permit application, statement of basis and environmental impact statement (response to IT questions) are available for review at the LDEQ, Public Records Center, Room 127, 602 North 5<sup>th</sup> Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). Additional copies may be reviewed at the Ascension Parish Library - Gonzales Branch located at 708 South Irma Boulevard, Gonzales LA 70737 and the Iberville Parish Library - East Iberville Branch located at 5715 Monticello Street, St. Gabriel LA 70776.

Inquiries or requests for additional information regarding this permit action should be directed to Mr. Syed Quadri, LDEQ, Air Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3123.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at [maillistrequest@ldeq.org](mailto:maillistrequest@ldeq.org) or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

**Permit public notices including electronic access to the proposed permit and statement of basis** can be viewed at the LDEQ permits public notice webpage at [www.deq.state.la.us/news/PubNotice/](http://www.deq.state.la.us/news/PubNotice/) and general information related to the public participation in permitting activities can be viewed at [www.deq.louisiana.gov/portal/tabcid/2198/Default.aspx](http://www.deq.louisiana.gov/portal/tabcid/2198/Default.aspx).

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at [http://www.state.la.us/ldbc/listservpage/ldeq\\_pn\\_listserv.htm](http://www.state.la.us/ldbc/listservpage/ldeq_pn_listserv.htm).

**All correspondence should specify AI Number 1136, Permit Number 2057-V3, and Activity Number PER20050033.**

**Publication Date: Friday, May 5, 2006**

**AIR PERMIT BRIEFING SHEET**  
**PERMITS DIVISION**  
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP**  
**AGENCY INTEREST NO.: 1136**  
**EO/EG-1 AND 2, GEISMAR PLANT**  
**GEISMAR, ASCENSION PARISH, LOUISIANA**

**I. Background**

Shell Chemical LP owns and operates a chemical manufacturing complex located in Geismar, Louisiana. EOEG-2 facility is currently operating under a Part 70 Operating Permit No. 2057-V2 dated June 29, 2004.

**II. Origin**

A permit application and Emission Inventory Questionnaire was submitted by Shell Chemical LP on December 22, 2005 requesting a Part 70 operating permit modification and renewal. Additional information dated March 17 and 28, 2006 was also received.

**III. Description**

Process unit EOEG-2 is an existing unit that produces ethylene oxide (EO) from the catalytic reaction of ethylene and oxygen. The EO is recovered by water absorption and steam stripping. The resulting aqueous EO is dehydrated and upgraded by fractionation to high purity EO (HPEO). HPEO is reacted with water to form ethylene glycol (EG). Lesser amount of diethylene and triethylene glycol (DEG and TEG) is also formed. The EG reactor effluent, a mixture of glycols and water, is dehydrated and the water recycled back to the reactor. The dehydrated mixed glycol stream is sent to the purification section for separation of the individual glycols EG, DEG, and TEG. EO is either used by other processes on site or shipped off site in tank cars. Glycols are shipped off site by tank trucks, tank cars, or by marine vessels. The emission sources for this process are process vents, storage tanks, fugitive components, cooling tower, loading/unloading operations, miscellaneous sources, Insignificant Activities and General Condition XVII Activities.

The facility is proposing to incorporate recent approved permit actions and other changes based on current operating conditions:

1. Incorporate two Small Source Exemptions dated March 13, 2003 for Oxygen Analyzer Project, and September 11, 2004 for Glycol Rerun to Glycol Bleed Flasher Project;
2. Update fugitive emissions from process equipment fugitive components based on previously approved permitting actions;
3. Update VOC speciated emissions based on the recent LDEQ guidance;
4. Incorporate allyl chloride emissions for several sources which were inadvertently omitted in the last permit application; and
5. Update General Condition XVII Activities and Insignificant Activities.

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In addition, the facility is proposing to modify the permit to include the High-purity Ethylene Oxide One (HPEO-1) Project. The equipment within the EOEG-1 Unit is nearing the end of its life and will have to be shutdown in 2006. As part of the HPEO-1 Project the facility will utilize the existing EO-1 purification column and associated equipment but the other redundant equipment will be dismantled.

The HPEO-1 Project will include the following:

1. Re-tray existing EO-1 Purification Column, C-EO302, to increase the reflux rate;
2. Install new piping and fugitive components associated with delivering aqueous EO feed from EO-3 Light Ends Column to the existing EO-1 Purification Column;
3. Install new piping and fugitive components associated with delivering materials from existing EO-1 Purification Column to EG-3 and produced HPEO from the EO-1 Purification Column to storage and loading;
4. Replace EO-1 Purification Column Overhead Subcooler, E-EO308C, with a larger subcooler to achieve the required temperature drop;
5. Replace existing vent absorber, EO-1 300 Vent, with a new vent absorber having a 99 percent removal efficiency along with associated piping and fugitive components;
6. Modify Brine Chilling System with electrical motors to accommodate the increased demand at the Overhead Subcooler;
7. Modify the EOEG-2 HPEO transfer pipeline and install a new HPEO pipeline chiller;
8. Install a new EG Bleeds Cooler and associated pipeline and fugitive components to the EOEG-2 Tank Farm;
9. Modify existing equipment and operating conditions to optimize EO and EG production with the new equipment;
10. The upstream and downstream units affected, without modifications except for fugitive components, by this project are Utilities for increased steam supply and wastewater; Logistics Unit for increased throughput, storage, and loading capacity, M-Unit and PDO-1 Unit for increased HPEO supply.

Shell Chemical's EOEG-2 Unit located at Geismar Plant is in a serious nonattainment area for ozone. Any modification to the facility that increases NOx and VOC emissions must be reviewed based on the New Source Review (NSR) requirements.

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Estimated emissions increase based on actual to potential related to the HPEO-1 Project irrespective of any decreases in tons per year are as follows:

<u>Pollutant</u>	<u>Project Emissions Increase</u>	<u>PSD/NNSR Significance Threshold</u>	<u>Netting Analysis</u>
PM <sub>10</sub>	0.75	15	NO
SO <sub>2</sub>	0.01	40	NO
NO <sub>x</sub>	13.20	40/25	NO
CO	11.22	100	NO
VOC	18.26	40/25	NO

The increase in emissions due to the HPEO-1 Project do not exceed the Prevention of Significant Deterioration (PSD) significance threshold, therefore, this project does not require netting or PSD review. Similarly, the increase in emissions due to this project do not exceed the Nonattainment New Source Review (NNSR) significance threshold, therefore, NNSR is not required.

Permitted emissions from EOEG-2 Unit in tons per year are as follows:

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
PM <sub>10</sub>	17.17	17.18	+ 0.01
SO <sub>2</sub>	0.19	0.19	+ 0.00
NO <sub>x</sub>	3.89	4.10	+ 0.21
CO	10.73	12.29	+ 1.56
VOC	38.33	47.03	+ 8.70

VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
Acetaldehyde	1.18	1.33	+ 0.15
Allyl chloride *	0.00	0.04	+ 0.04
Ethylene glycol	9.66	8.72	- 0.94
Ethylene oxide *	2.44	3.71	+ 1.27
Formaldehyde	0.17	0.20	+ 0.03

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**VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):**

Pollutant	Before	After	Change
Methanol	0.10	0.91	+ 0.81
Vinyl chloride	<0.01	0.00	-
Total	13.55	14.88	+ 1.28

**Other VOC (TPY):**                  32.18

- \* Allyl chloride was inadvertently omitted from the previous applications. Allyl chloride and ethylene oxide emissions increase due to the project is greater than its minimum emission rate (MER).

**IV. Type of Review**

This permit was reviewed for compliance with 40 CFR 70, the Louisiana Air Quality Regulations, New Source Performance Standards (NSPS) and NESHAP. New Source Review is not required.

This facility is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51. Acetaldehyde, allyl chloride, ethylene oxide, and formaldehyde emissions are above the minimum emission rates (MER) under Louisiana Air Toxic Regulations. Process vents containing acetaldehyde, ethylene oxide, and formaldehyde shall comply with maximum achievable control technology (MACT) requirements by maintaining the total resource effectiveness (TRE) index values above 4.0 (Group 2) in accordance with NESHAP (HON) Subpart G - National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater.

Fugitive emissions from equipment containing organic hazardous air pollutants are monitored under the leak detection and repair (LDAR) requirements of NESHAP (HON) Subpart H – National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.

The impact of pollutants on air quality is below toxic ambient air standards (AAS) and national ambient air quality standards (NAAQS). The air toxic compliance plan was approved by LDEQ on August 31, 1995.

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**V. Credible Evidence**

Notwithstanding any other provisions of any applicable rule or regulation or requirement of this permit that state specific methods that may be used to assess compliance with applicable requirements, pursuant to 40 CFR Part 70 and EPA's Credible Evidence Rule, 62 Fed. Reg. 8314 (Feb. 24, 1997), any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed shall be considered for purposes of Title V compliance certifications. Furthermore, for purposes of establishing whether or not a person has violated or is in violation of any emissions limitation or standard or permit condition, nothing in this permit shall preclude the use, including the exclusive use, by any person of any such credible evidence or information.

**VI. Public Notice**

A notice requesting public comment on the permit was published in The Advocate, Baton Rouge, Louisiana and The \*\*\*\*\* Geismar, Louisiana, on \*\*\*\*, 2006. Written and oral comments received during the comment period from the general public and organizations will be considered before issuing the permit. Copies of the public notice were mailed out to individuals on the mailing list maintained by Office of Environmental Services on \*\*\*\*, 2006. The proposed permit was sent to EPA via e-mail on \*\*\*\*, 2006.

**VII. Effects on Ambient Air**

Dispersion Model(s) Used: None

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Air Quality Standard (NAAQS)
NA			

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**VIII. General Condition XVII Activities**

Activity	Frequency	VOC	PM	SO2	NOx	CO
		TPY	TPY			
EO-2 Shutdown Purges	150,050 cu. ft/yr	0.02	-			
EO-2 Daily Maintenance	6 purges/yr	0.02	-			
EG-2 Shutdown Purges	100,050 cu. ft/yr	0.02	-			
EG-2 Daily Maintenance	12 purges/yr	0.02	-			
EG-2 Pretreatment System Purge	18 days/yr	0.09	-			
EOEG-2 Reactor Purge	5 purges/yr	0.62				
Large Fuel Fired Equipment	500 hp * 600 hrs	0.38	0.33	0.31	4.65	1.00
Small Fuel Fired Equipment	50 hp *6000 hrs	0.38	0.33	0.31	4.65	1.00

**IX. Insignificant Activities**

ID No.:	Description	Citation
-	Lab Vents	LAC 33:III.501.B.5.A.6

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**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	LAC 33:III.Chapter																	
		5	9	11	13	15	2103	2104	2107	2111	2115	2116	21	22	29*	51*	53	56	59
GRP28	EOEG-2 Facility	1	1	1	1	1							1	1	1	1	1	1	1
EQT12	01A-85, DEG Rundown Tank												2						
EQT14	01C-85, TEG Rundown Tank												2						
EQT16	02-86, ISOPAR-L Storage Tank												2						
EQT19	03-77, EO-2 Cooling Tower																		
EQT20	03-91, Lean Absorbent Surge Tank												2						
EQT21	04-91, Brine Surge Tank												1						
EQT22	04A-77, EG Flasher Bottoms Tank												2						
EQT23	04B-77, ISOPAR-G Storage Tank												2						
EQT24	04C-77, EG Rerun Tank												2						
EQT25	04D-77, EG Rundown Tank												2						
EQT26	04E-77, EG Rundown Tank												2						
EQT27	04F-77, DEG Rundown Tank												2						
EQT28	04G-77, DEG Rundown Tank												2						
EQT29	04H-77, TEG Rundown Tank												2						
EQT30	04I-77, TEG Rundown Tank												2						
EQT33	06-91, Process Analyzers EO-2																	1	

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ID No.:	Description	LAC 33:III. Chapter																
		5	9	11	13	15	2103	2104	2107	2111	2115	2116	21	22	29*	51*	53	56
EQT34	10-91, EO1&2 Brine Surge Tank						1										1	
EQT35	15A2-71, EG Rundown Tank							2									1	
EQT38	15D2-71, EG Rundown Tank							2									1	
EQT39	15S3-71, ISOPAR-L Storage								2									
EQT40	15T1-71, EG Rerun Tank								2									
EQT41	15U1-71, EG Rundown Tank								2									
EQT42	15V1-71, Carbonate Tank								2									
EQT46	55-87, TEG Bottoms Storage								2									
EQT47	56-87, TEG Bottoms Storage								2									
EQT48	59A-86, EO Tank Car Vent Absorber									1				2		2		1
EQT49	62A-88, EO/EG Backup Gen. Driver																	
EQT50	62B-88, Diesel Storage									2								
EQT51	104-00, GBF & TEG Bottoms T/T Loading																1	
EQT52	04N-77, EO Storage Vessel																	
EQT53	04P-77, EO Storage Vessel									1							1	
EQT54	04Q-77, EO Storage Vessel									1							1	
EQT55	04S-77, EO Storage Vessel									1							1	
EQT56	15T3-71, EO Storage Vessel										1						1	

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ID No.:	Description	LAC 33:III.Chapter																
		5	9	11	13	15	2103	2104	2107	2111	2115	2116	21	22	29*	51*	53	56
EQT57	15U3-71, EO Storage Vessel						1										1	
EQT58	15V3-71, EO Storage Vessel							1									1	
EQT59	15W3-71, EO Storage Vessel								1								1	
EQT60	15X3-71, SO Storage Vessel								1								1	
EQT61	15Y3-71, EO Storage Vessel								1								1	
EQT62	CWHE003, Cooling Water Heat Exch.																1	
EQT63	CWHE004, Cooling Water Heat Exch.																1	
EQT65	CWHE005, Cooling Water Heat Exch.																1	
EQT66	CWHE006, Cooling Water Heat Exch.																1	
EQT67	CWHE007, Cooling Water Heat Exch.																1	
EQT68	CWHE008, Cooling Water Heat Exch.																1	
EQT69	CWHE012, Cooling Water Heat Exch.																1	
EQT70	CWHE013, Cooling Water Heat Exch.																1	
EQT71	CWHE014, Cooling Water Heat Exch.																1	
EQT72	CWHE024, Cooling Water Heat Exch.																1	
EQT73	CWHE028, Cooling Water Heat Exch.																1	
EQT74	CWHE029, Cooling Water Heat Exch.																1	
EQT75	CWHE030, Cooling Water Heat Exch.																1	

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ID No.:	Description	LAC 33:III Chapter																
		5	9	11	13	15	2103	2104	2107	2111	2115	2116	21	22	29*	51*	53	56
EQT76	CWHE031, Cooling Water Heat Exch.																	1
EQT77	CWHE032, Cooling Water Heat Exch.																	1
EQT78	CWHE033, Cooling Water Heat Exch.																	1
EQT79	CWHE034, Cooling Water Heat Exch.																	1
EQT80	CWHE035, Cooling Water Heat Exch.																	1
EQT81	CWHE036, Cooling Water Heat Exch.																	1
EQT82	CWHE037, Cooling Water Heat Exch.																	1
EQT83	CWHE038, Cooling Water Heat Exch.																	1
EQT84	CWHE039, Cooling Water Heat Exch.																	1
EQT85	CWHE040, Cooling Water Heat Exch.																	1
EQT86	CWHE041, Cooling Water Heat Exch.																	1
EQT87	CWHE042, Cooling Water Heat Exch.																	1
EQT88	CWHE043, Cooling Water Heat Exch.																	1
EQT89	CWHE044, Cooling Water Heat Exch.																	1
EQT90	CWHE045, Cooling Water Heat Exch.																	1
EQT91	CWHE046, Cooling Water Heat Exch.																	1
EQT92	CWHE047, Cooling Water Heat Exch.																	1
EQT93	CWHE048, Cooling Water Heat Exch.																	1

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ID No.:	Description	LAC 33:III Chapter																
		5	9	11	13	15	2103	2104	2107	2111	2115	2116	21	22	29*	51*	53	56
EQT94	CWHE049, Cooling Water Heat Exch.																	
EQT95	CWHE050, Cooling Water Heat Exch.																	1
EQT96	CWHE051, Cooling Water Heat Exch.																	1
EQT97	CWHE052, Cooling Water Heat Exch.																	1
EQT98	CWHE053, Cooling Water Heat Exch.																	1
EQT99	CWHE054, Cooling Water Heat Exch.																	1
EQT100	CWHE055, Cooling Water Heat Exch.																	1
EQT101	CWHE056, Cooling Water Heat Exch.																	1
EQT102	CWHE057, Cooling Water Heat Exch.																	1
EQT103	CWHE058, Cooling Water Heat Exch.																	1
EQT104	CWHE059, Cooling Water Heat Exch.																	1
EQT105	CWHE060, Cooling Water Heat Exch.																	1
EQT106	CWHE061, Cooling Water Heat Exch.																	1
EQT107	CWHE062, Cooling Water Heat Exch.																	1
EQT108	NNN-01, Column																	
EQT109	NNN-46, Column																	
EQT110	PWW-04, Process Wastewater																	1
EQT111	PWW-05, Process Wastewater																	1

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP  
AGENCY INTEREST NO.: 1136  
EO/EG-1 AND 2, GEISMAR PLANT  
GEISMAR, ASCENSION PARISH, LOUISIANA**

**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	LAC 33:III.Chapter																
		5	9	11	13	15	2103	2104	2107	2111	2115	2116	21	22	29*	51*	53	56
EQT112	PWW-06, Process Wastewater																	
EQT113	PWW-07, Process Wastewater																	1
EQT114	PWW-08, EO Blowdown																	1
EQT115	PWW-09, Process Wastewater																	1
EQT116	PWW-10, Process Wastewater																	1
EQT117	PWW-11, Process Wastewater																	1
EQT118	PWW-12, Process Wastewater																	1
EQT119	PWW-22, EO2 Oxidizer KO Pot																	1
EQT120	PV-04, Process Vent																	1
EQT121	PV-05, Process Vent																	1
EQT122	PV-06, Process Vent																	1
EQT123	PV-07, Process Vent																	1
EQT124	PV-15, Process Vent																	1
EQT125	60-86, Flasher Tops Accum.																	1
FUG3	55C-88, Fugitive Emissions EO2																	1
FUG4	55D-88, Fugitive Emissions EG2																	1
FUG5	55E-88, Fugitive Emissions EO/EG Tank Farm																	1

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP**  
**AGENCY INTEREST NO.: 1136**  
**EO/EG-1 AND 2, GEISMAR PLANT**  
**GEISMAR, ASCENSION PARISH, LOUISIANA**

**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	LAC 33:III.Chapter																	
		5	9	11	13	15	2103	2104	2107	2111	2115	2116	21	22	29*	51*	53	56	59
RLP28	17-96, Contaminated Steam Vent EG									1						1			
RLP31	20-96, EO-2 Sour Oil Gas Vent									1						1			
RLP34	23A-96, EG-2 Hotwell Vent															1			
RLP35	26-98, EG2 GBF/Prif Vac Aftercond Vent									2		2			2		1		
RLP36	27-98, EG2 DEG Col Vac Aftercond Vent									2		2			2		1		
RLP37	41-91, EO Effluent Pretreat Feed Tank Scrubber Vent									2		2			2		1		
RLP39	64-86, EO2 700 Vent									2		2			2		1		
RLP41	97-00, EO-2 Oxidizer Vent																1		

\* The regulations indicated above are State Only regulations.

- ▲ All LAC 33:III Chapter 5 citations are federally enforceable including LAC 33:III.501.C.6 citations, except when the requirement found in the "Specific Requirements" report specifically states that the regulation is State Only.

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP**  
**AGENCY INTEREST NO.: 1136**  
**EO/EG-1 AND 2, GEISMAR PLANT**  
**GEISMAR, ASCENSION PARISH, LOUISIANA**

**KEY TO MATRIX**

- 1 -The regulations have applicable requirements which apply to this particular emission source.  
-The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
- 2 -The regulations have applicable requirements which apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criteria, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
- 3 -The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.  
Blank – The regulations clearly do not apply to this type of emission source.  
LAC 33:III, Chapter 29 and 51 – STATE ONLY requirements.

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP**  
**AGENCY INTEREST NO.: 1136**  
**EO/EG-1 AND 2, GEISMAR PLANT**  
**GEISMAR, ASCENSION PARISH, LOUISIANA**

**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	40 CFR 60 NSPS						40 CFR 61						40 CFR 63 NESHAP						40 CFR			
		K	Ka	Kb	Db	RR	NNN	A	J	M	FF	A	F	G	H	Q	52	64	68				
GRP28	EOEG-2 Facility							1	1	1	1									2	1		
EQT12	01A-85, DEG Rundown Tank																			2	2		
EQT14	01C-85, TEG Rundown Tank																			2	2		
EQT16	02-86, ISOPAR-L Storage Tank																			2			
EQT19	03-77, EO-2 Cooling Tower																			1			
EQT20	03-91, Lean Absorbent Surge Tank																			1			
EQT21	04-91, Brine Surge Tank																			1			
EQT22	04A-77, EG Flasher Bottoms Tank																			1			
EQT23	04B-77, ISOPAR-G Storage Tank																			2	2		
EQT24	04C-77, EG Rerun Tank																			1			
EQT25	04D-77, EG Rundown Tank																			2	2		
EQT26	04E-77, EG Rundown Tank																			1			
EQT27	04F-77, DEG Rundown Tank																			2	2		
EQT28	04G-77, DEG Rundown Tank																			2	2		
EQT29	04H-77, TEG Rundown Tank																			2	2		

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

**SHELL CHEMICAL LP**  
**AGENCY INTEREST NO.: 1136**  
**EO/EG-1 AND 2, GEISMAR PLANT**  
**GEISMAR, ASCENSION PARISH, LOUISIANA**

**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	40 CFR 60 NSPS						40 CFR 61			40 CFR 63 NESHAP			40 CFR		
		K	Ka	Kb	Db	RRR	NNN	A	J	M	FF	A	F	G	H	Q
EQT30	041-77, TEG Rundown Tank			2									2	2		
EQT33	06-91, Process Analyzers EO-2			2									1	1		
EQT34	10-91, EO1&2 Brine Surge Tank			2										1		
EQT35	15A2-71, EG Rundown Tank			2										1		
EQT38	15D2-71, EG Rundown Tank			2										1		
EQT39	15S3-71, ISOPAR-L Storage			2										2	2	
EQT40	15T1-71, EG Rerun Tank			2										1		
EQT41	15U1-71, EG Rundown Tank			2											1	
EQT42	15V1-71, Carbonate Tank			2											2	2
EQT46	55-87, TEG Bottoms Storage			2											2	2
EQT47	56-87, TEG Bottoms Storage			2											2	2
EQT48	59A-86, EO Tank Car Vent Absorber			2											2	
EQT49	62A-88, EO/EG Backup Gen. Driver															
EQT50	62B-88, Diesel Storage														2	2
EQT51	104-00, GBF & TEG Bottoms T/T Loading														1	

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

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**AGENCY INTEREST NO.: 1136**  
**EO/EG-1 AND 2, GEISMAR PLANT**  
**GEISMAR, ASCENSION PARISH, LOUISIANA**

**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	40 CFR 60 NSPS			40 CFR 61			40 CFR 63 NESHAP			40 CFR			
		K	Ka	Kb	Db	RRR	NNN	A	J	M	FF	A	F	G
EQT52	04N-77, EO Storage Vessel			2								2	2	
EQT53	04P-77, EO Storage Vessel			2								2	2	
EQT54	04Q-77, EO Storage Vessel			2								2	2	
EQT55	04S-77, EO Storage Vessel			2								2	2	
EQT56	15T3-71, EO Storage Vessel			2								2	2	
EQT57	15U3-71, EO Storage Vessel			2								2	2	
EQT58	15V3-71, EO Storage Vessel			2								2	2	
EQT59	15W3-71, EO Storage Vessel			2								2	2	
EQT60	15X3-71, SO Storage Vessel			2								2	2	
EQT61	15Y3-71, EO Storage Vessel			2								2	2	
EQT62	CWHE003, Cooling Water Heat Exch													
EQT63	CWHE004, Cooling Water Heat Exch													
EQT65	CWHE005, Cooling Water Heat Exch													
EQT66	CWHE006, Cooling Water Heat Exch													
EQT67	CWHE007, Cooling Water Heat Exch													
EQT68	CWHE008, Cooling Water Heat Exch													

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP  
AGENCY INTEREST NO.: 1136  
EO/EG-1 AND 2, GEISMAR PLANT  
GEISMAR, ASCENSION PARISH, LOUISIANA**

**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	40 CFR 60 NSPS					40 CFR 61					40 CFR 63 NESHAP					40 CFR
		K	Ka	Kb	Db	RRR	NNN	A	J	M	FF	A	F	G	H	Q	
EQT69	CWHE012, Cooling Water Heat Exch.																
EQT70	CWHE013, Cooling Water Heat Exch.																
EQT71	CWHE014, Cooling Water Heat Exch.																
EQT72	CWHE024, Cooling Water Heat Exch.																
EQT73	CWHE028, Cooling Water Heat Exch.																
EQT74	CWHE029, Cooling Water Heat Exch.																
EQT75	CWHE030, Cooling Water Heat Exch.																
EQT76	CWHE031, Cooling Water Heat Exch.																
EQT77	CWHE032, Cooling Water Heat Exch.																
EQT78	CWHE033, Cooling Water Heat Exch.																
EQT79	CWHE034, Cooling Water Heat Exch.																
EQT80	CWHE035, Cooling Water Heat Exch.																
EQT81	CWHE036, Cooling Water Heat Exch.																
EQT83	CWHE038, Cooling Water Heat Exch.																
EQT84	CWHE039, Cooling Water Heat Exch.																
EQT85	CWHE040, Cooling Water Heat Exch.																
EQT86	CWHE041, Cooling Water Heat Exch.																

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP**  
**AGENCY INTEREST NO.: 1136**  
**EO/EG-1 AND 2, GEISMAR PLANT**  
**GEISMAR, ASCENSION PARISH, LOUISIANA**

**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	40 CFR 60 NSPS						40 CFR 61						40 CFR 63 NESHAP						40 CFR	
		K	Ka	Kb	Db	RRR	NNN	A	J	M	FF	A	F	G	H	Q	52	64	68		
EQT87	CWHE042, Cooling Water Heat Exch.																2				
EQT88	CWHE043, Cooling Water Heat Exch.																2				
EQT89	CWHE044, Cooling Water Heat Exch.																2				
EQT90	CWHE045, Cooling Water Heat Exch.																2				
EQT91	CWHE046, Cooling Water Heat Exch.																2				
EQT92	CWHE047, Cooling Water Heat Exch.																2				
EQT93	CWHE048, Cooling Water Heat Exch.																2				
EQT94	CWHE049, Cooling Water Heat Exch.																1				
EQT95	CWHE050, Cooling Water Heat Exch.																1				
EQT96	CWHE051, Cooling Water Heat Exch.																1				
EQT97	CWHE052, Cooling Water Heat Exch.																1				
EQT98	CWHE053, Cooling Water Heat Exch.																1				
EQT99	CWHE054, Cooling Water Heat Exch.																1				
EQT100	CWHE055, Cooling Water Heat Exch.																2				
EQT101	CWHE056, Cooling Water Heat Exch.																2				
EQT102	CWHE057, Cooling Water Heat Exch.																2				
EQT103	CWHE058, Cooling Water Heat Exch.																2				
EQT104	CWHE059, Cooling Water Heat Exch.																2				

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP  
AGENCY INTEREST NO.: 1136  
EO/EG-1 AND 2, GEISMAR PLANT  
GEISMAR, ASCENSION PARISH, LOUISIANA**

**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	40 CFR 60 NSPS						40 CFR 61						40 CFR 63 NESHAP						40 CFR					
		K	Ka	Kb	Db	RRR	NNN	A	J	M	FF	A	F	G	H	Q	52	64	68						
EQT105	CWHE060, Cooling Water Heat Exch.																2								
EQT106	CWHE061, Cooling Water Heat Exch.																2								
EQT107	CWHE062, Cooling Water Heat Exch.																2								
EQT108	NNN-01, Column																2								
EQT109	NNN-46, Column																2								
EQT110	PWW-04, Process Wastewater																1								
EQT111	PWW-05, Process Wastewater																1								
EQT112	PWW-06, Process Wastewater																1								
EQT113	PWW-07, Process Wastewater																1								
EQT114	PWW-08, EO Blowdown																1								
EQT115	PWW-09, Process Wastewater																1								
EQT116	PWW-10, Process Wastewater																1								
EQT117	PWW-11, Process Wastewater																1								
EQT118	PWW-12, Process Wastewater																1								
EQT119	PWW-22, EO2 Oxidizer KO Pot																1								
EQT120	PV-04, Process Vent																2	2							
EQT121	PV-05, Process Vent																2	2							
EQT122	PV-06, Process Vent																2	2							

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP**  
**AGENCY INTEREST NO.: 1136**  
**EO/EG-1 AND 2, GEISMAR PLANT**  
**GEISMAR, ASCENSION PARISH, LOUISIANA**

**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	40 CFR 60 NSPS					40 CFR 61					40 CFR 63 NESHAP					40 CFR		
		K	Ka	Kb	Db	RRR	NNN	A	J	M	FF	A	F	G	H	Q	52	64	68
EQT123	PV-07, Process Vent							2	2							2	2		
EQT124	PV-15, Process Vent							2	2							1			
EQT125	60-68, Flasher Tops Accum.							2	1							1			
FUG3	55C-88, Fugitive Emissions EO2																1		
FUG4	55D-88, Fugitive Emissions EG2															1			
FUG5	55E-88, Fugitive Emissions EO/EG Tank Farm															1			
RLP28	17-96, Contaminated Steam Vent EG							2	2							2	2		
RLP31	20-96, EO-2 Sour Oil Gas Vent							2	2							2	2		
RLP34	23A-96, EG-2 Hotwell Vent															2	2		
RLP35	26-98, EG2 GBF/Purif Vac Aftercond Vent							2	1							1			
RLP36	27-98, EG2 DEG Col Vac Aftercond Vent							2	2							1			
RLP37	41-91, EO Effl Pretreat Fd Tank Scrubber Vent															2	2		
RLP39	64-86, EO2 700 Vent									2	2					1			
RLP41	97-00, EO-2 Oxidizer Vent															1			

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP**  
**AGENCY INTEREST NO.: 1136**  
**EO/EG-1 AND 2, GEISMAR PLANT**  
**GEISMAR, ASCENSION PARISH, LOUISIANA**

**X. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	40 CFR 60 NSPS			40 CFR 61			40 CFR 63 NESHPAP			40 CFR							
		K	Ka	Kb	Db	RRR	NNN	A	J	M	FF	A	F	G	H	Q	52	64

**KEY TO MATRIX**

- 1 -The regulations have applicable requirements which apply to this particular emission source.  
-The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
- 2 -The regulations have applicable requirements which apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criteria, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
- 3 -The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.  
Blank – The regulations clearly do not apply to this type of emission source.

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP  
AGENCY INTEREST NO.: 1136  
EO/EG-1 AND 2, GEISMAR PLANT  
GEISMAR, ASCENSION PARISH, LOUISIANA**

**XI. Explanation for Exemption Status or Non-Applicability of a Source**

ID No:	Requirement	Notes
GRP28	40 CFR 64, Compliance Assurance Monitoring (CAM), 40 CFR 64(a)(1), (a)(2), (a)(3) and (b)(1)(i)	Not applicable or exempt: No control device and/or controlled/uncontrolled emissions less than the major source threshold and/or not subject to any limitation and/or regulation promulgated after November 15, 1990
EQT12-16, 20, 22-30, 35, 38-42, 46, 47 and 50	LAC 33:III.2103, Storage of VOC	Not applicable. The true vapor pressure of stored material is less than 1.5 psia.
EQT 48 RLP35, 36, 37 and 39	LAC 33:III.2115, Waste Gas Disposal	Exempt. The stream has a combined weight of VOCs less than 100 lbs in any 24 hour period. [LAC 33:III.2115.H.1.c.]
EQT124 and 125	LAC 33:III.2115, Waste Gas Disposal	Not applicable. This vent is subject to 40 CFR 60 Subpart NNN and 40 CFR 63 Subpart G.
EQT 48, 125 RLP35 and 36	LAC 33:III.2147, VOC Emissions From Reactor Processes and Distillation Operations in the SOCMI	Exempt. Not applicable. These processes or operations are subject to 40 CFR 60 Subpart NNN, Subpart RRR, and 40 CFR 63 Subpart G.
EQT22-26, 35, 38-42, 46, 47 and 52-61	NSPS Subpart Kb, VOL Storage Vessels, 40 CFR 60.110b(b)	Not applicable. The tanks were not constructed, reconstructed, or modified since July 23, 1984
EQT12, 14, 16, 21, 27-30, 34 and 50	NSPS Subpart Kb, VOL Storage Vessels, 40 CFR 60.110b(b)	Not applicable. The tanks capacity and vapor pressure less than the requirements of this regulation.
EQT 120-124 RLP28, 31, 36 and 39	NSPS Subpart NNN, Standards of Performance for VOC Emissions from SOCMI Distillation Operations, 40 CFR 60.660	Not applicable. Not constructed, reconstructed or modified since December 30, 1983.

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SHELL CHEMICAL LP**  
**AGENCY INTEREST NO.: 1136**  
**EO/EG-1 AND 2, GEISMAR PLANT**  
**GEISMAR, ASCENSION PARISH, LOUISIANA**

**XI. Explanation for Exemption Status or Non-Applicability of a Source**

ID No:	Requirement	Notes
EQT 120-125 RLP28, 31, 35, 36 and 39	NSPS Subpart RRR, Standards of Performance for VOC Emissions from SOCMI Reactor Processes, 40 CFR 60.700	Not applicable. Not constructed, reconstructed or modified since June 29, 1990.
EQT12, 14, 16, 23, 27- 30, 39, 42, 46-48, 50, 52- 61 and 120-123 RLP28, 31, 34 and 37	NESHAP Subpart F and G, NESHAP from the SOCMI and from the SOCMI for Process Vents, Storage Vessels, Transfer Operations and Wastewater, 40 CFR 63.100 and 110	Not applicable. The tanks, vents and loading racks do not meet the definition in 40 CFR 63.101 and 111.
EQT62, 63, 65-107	NESHAP, Subpart F, Fro, SOCMI	See "Specific Requirements"

The above table provides explanation for both the exemption status or non-applicability of a source cited by 2 or 3 in the matrix presented in Section VII of this permit.

## 40 CFR PART 70 GENERAL CONDITIONS

- A. The term of this permit shall be five (5) years from date of issuance. An application for a renewal of this 40 CFR Part 70 permit shall be submitted to the administrative authority no later than six months prior to the permit expiration date. Should a complete permit application not be submitted six months prior to the permit expiration date, a facility's right to operate is terminated pursuant to 40 CFR Section 70.7(c)(ii). Operation may continue under the conditions of this permit during the period of the review of the application for renewal. [LAC 33:III.507.E.1, E.3, E.4, reference 40 CFR 70.6(a)(2)]
- B. The conditions of this permit are severable; and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. [Reference 40 CFR 70.6(a)(5)]
- C. Permittee shall comply with all conditions of the 40 CFR Part 70 permit. Any permit noncompliance constitutes a violation of the Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [LAC 33:III.507.B.2, reference 40 CFR 70.6(a)(6)(i) & (iii)]
- D. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [Reference 40 CFR 70.6(a)(6)(ii)]
- E. This permit does not convey any property rights of any sort, or an exclusive privilege. [Reference 40 CFR 70.6(a)(6)(iv)]
- F. The permittee shall furnish to the permitting authority, within a reasonable time, any information that the permitting authority may request in writing to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the permitting authority copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality. A claim of confidentiality does not relieve the permittee of the requirement to provide the information. [LAC 33:III.507.B.2, 517.F, reference 40 CFR 70.6(a)(6)(v)]
- G. Permittee shall pay fees in accordance with LAC 33:III.Chapter 2 and 40 CFR Section 70.6(a)(7). [LAC 33:III.501.C.2, reference 40 CFR 70.6(a)(7)]
- H. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the permitting authority or authorized representative to perform the following:
  1. enter upon the permittee's premises where a 40 CFR Part 70 source is located or emission-related activity is conducted, or where records must be kept under the conditions of the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(i)];
  2. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(ii)];
  3. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(iii)]; and

## 40 CFR PART 70 GENERAL CONDITIONS

4. as authorized by the Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(iv)]
- I. All required monitoring data and supporting information shall be kept available for inspection at the facility or alternate location approved by the agency for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Supporting information includes calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and all reports required by the permit.  
[Reference 40 CFR 70.6(a)(3)(ii)(B)]
- J. Records of required monitoring shall include the following:
  1. the date, place as defined in the permit, and time of sampling or measurements;
  2. the date(s) analyses were performed;
  3. the company or entity that performed the analyses;
  4. the analytical techniques or methods used;
  5. the results of such analyses; and
  6. the operating conditions as existing at the time of sampling or measurement.  
[Reference 40 CFR 70.6(a)(3)(ii)(A)]
- K. Permittee shall submit at least semiannually, reports of any required monitoring, clearly identifying all instances of deviations from permitted monitoring requirements, certified by a responsible company official. For previously reported deviations, in lieu of attaching the individual deviation reports, the semiannual report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The semiannual reports shall be submitted to the Office of Environmental Compliance, Surveillance Division by March 31 for the preceding period encompassing July through December and September 30 for the preceding period encompassing January through June. Any quarterly deviation report required to be submitted by March 31 or September 30 in accordance with Part 70 General Condition R may be consolidated with the semi-annual reports required by this general condition as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. [LAC 33:III.507.H, reference 40 CFR 70.6(a)(3)(iii)(A)]
- L. The permittee shall submit at least semiannual reports on the status of compliance pursuant to 40 CFR Section 70.5 (c) (8) and a progress report on any applicable schedule of compliance pursuant to 40 CFR Section 70.6 (c) (4). [LAC 33:III.507.H.1, reference 40 CFR 70.6(c)(4)]
- M. Compliance certifications per LAC 33:III.507.H.5 shall be submitted to the Administrator as well as the permitting authority. For previously reported compliance deviations, in lieu of attaching the individual deviation reports, the annual report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The compliance certifications shall be submitted to the Office of Environmental Compliance, Surveillance Division by March 31 for the preceding calendar year.  
[LAC 33:III.507.H.5, reference 40 CFR 70.6(c)(5)(iv)]
- N. If the permittee seeks to reserve a claim of an affirmative defense as provided in LAC 33:III.507.J.2, the permittee shall, in addition to any emergency or upset provisions in any applicable regulation, notify the permitting authority within 2 working days of the time when emission limitations were exceeded due to the occurrence of an upset. In the event of an upset, as defined under LAC 33:III.507.J, which results in excess emissions, the permittee shall demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that: 1) an

## **40 CFR PART 70 GENERAL CONDITIONS**

emergency occurred and the cause was identified; 2) the permitted facility was being operated properly at the time; and 3) during the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standard or requirement of the permit. [LAC 33:III.507.J.2, reference 40 CFR 70.6(g)(3)(iv) & (i-iii)]

- O. Permittee shall maintain emissions at a level less than or equal to that provided for under the allowances that the 40 CFR Part 70 source lawfully holds under Title IV of the Clean Air Act or the regulations promulgated thereunder. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Clean Air Act. [Reference 40 CFR 70.6(a)(4)]
- P. Any permit issued pursuant to 40 CFR Part 70 may be subject to reopening prior to the expiration of the permit for any of the conditions specified in 40 CFR Section 70.7(f) or LAC 33:III.529. [LAC 33:III.529.A-B, reference 40 CFR 70.7(f)]
- Q. Permittee may request an administrative amendment to the permit to incorporate test results from compliance testing if the following criteria are met:
  - 1. the changes are a result of tests performed upon start-up of newly constructed, installed, or modified equipment or operations;
  - 2. increases in permitted emissions will not exceed five tons per year for any regulated pollutant;
  - 3. increases in permitted emissions of Louisiana toxic air pollutants or of federal hazardous air pollutants would not constitute a modification under LAC 33:III. Chapter 51 or under Section 112 (g) of the Clean Air Act;
  - 4. changes in emissions would not require new source review for prevention of significant deterioration or nonattainment and would not trigger the applicability of any federally applicable requirement;
  - 5. changes in emissions would not qualify as a significant modification; and
  - 6. the request is submitted no later than 12 months after commencing operation. [LAC 33:III.523.A, reference 40 CFR 70.7(d)]
- R. Permittee shall submit prompt reports of all permit deviations as specified below to the Office of Environmental Compliance, Surveillance Division. All such reports shall be certified by a responsible official in accordance with 40 CFR 70.5(d).
  - 1. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
  - 2. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.
  - 3. A written report shall be submitted quarterly to address all permit deviations not included in paragraphs 1 or 2 above. Unless required by an applicable reporting requirement, a

## **40 CFR PART 70 GENERAL CONDITIONS**

written report is not required during periods in which there is no deviation. The quarterly deviation reports submitted on March 31 and September 30 may be consolidated with the semi-annual reports required by Part 70 General Condition K as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. For previously reported permit deviations, in lieu of attaching the individual deviation reports, the quarterly report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any permit deviations occurring during the corresponding specified calendar quarter:

- a. Report by June 30 to cover January through March
  - b. Report by September 30 to cover April through June
  - c. Report by December 31 to cover July through September
  - d. Report by March 31 to cover October through December
4. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided such reports are certified in accordance with 40 CFR 70.5(d) and contain all information relevant to the permit deviation. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107. [Reference 40 CFR 70.6(a)(3)(iii)(B)]
- S. Permittee shall continue to comply with applicable requirements on a timely basis, and will meet on a timely basis applicable requirements that become effective during the permit term. [Reference 40 CFR 70.5(c)(8)(iii)]
- T. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156;
  2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158;
  3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161;
  4. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to 40 CFR 82.166. ("MVAC-like appliance" as defined at 40 CFR 82.152);
  5. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR 82.156; and
  6. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166. [Reference 40 CFR 82, Subpart F]

## **40 CFR PART 70 GENERAL CONDITIONS**

- U. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant. [Reference 40 CFR 82, Subpart B]

- V. Data availability for continuous monitoring or monitoring to collect data at specific intervals: Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the emissions unit is operating. For purposes of reporting monitoring deviations under Part 70 General Conditions K and R, and unless otherwise provided for in the Specific Requirements (or Table 3) of this permit, the minimum degree of data availability shall be at least 90% (based on a monthly average) of the operating time of the emissions unit or activity being monitored. This condition does not apply to Leak Detection and Repair (LDAR) programs for fugitive emissions (e.g., 40 CFR 60 Subpart VV, 40 CFR 63 Subpart H).

**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

- I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.
- II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.
- III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application and Emission Inventory Questionnaire dated December 22, 2005 and additional information dated March 17 and 28, 2006.
- IV. This permit shall become invalid, for the sources not constructed, if:
  - A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;
  - B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.  
This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.
- V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.
- VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is certified as complete and the estimated date of start-up of

**LOUISIANA AIR EMISSION PERMIT**  
**GENERAL CONDITIONS**

- operation. The appropriate Regional Office shall also be so notified within the same time frame.
- VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.
- VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.
- IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Surveillance Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition I.
- X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.
- XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Surveillance Division with a written report as specified below.
- A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
  - B. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.
  - C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:

**LOUISIANA AIR EMISSION PERMIT  
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1. Report by June 30 to cover January through March
  2. Report by September 30 to cover April through June
  3. Report by December 31 to cover July through September
  4. Report by March 31 to cover October through December
- D. Each report submitted in accordance with this condition shall contain the following information:
1. Description of noncomplying emission(s);
  2. Cause of noncompliance;
  3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
  4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
  5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.
- E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.
- XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:
- A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;
  - B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;
  - C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and
  - D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.
- XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.

**LOUISIANA AIR EMISSION PERMIT  
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- XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.
- XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.
- XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services, Air Permits Division, within ninety (90) days after the event, to amend this permit.
- XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:
1. Generally be less than 5 TPY
  2. Be less than the minimum emission rate (MER)
  3. Be scheduled daily, weekly, monthly, etc., or
  4. Be necessary prior to plant startup or after shutdown [line or compressor pressuring/depressuring for example]
- These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility must comply with all applicable requirements, including release reporting under LAC 33:1.3901.
- XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:
- Attention: Office of the Secretary, Legal Services Division  
La. Dept. of Environmental Quality  
Post Office Box 4302  
Baton Rouge, Louisiana 70821-4302
- XIX. Certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

## General Information

AI ID: 1136 Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

Also Known As:	ID	Name	User Group	Start Date
LA05258	ADVF #	Shell Chemical Co - Geismar Plant	Asbestos	04-14-2003
0180-00010		Shell Chemical Co - Geismar Plant	CDS Number	08-22-2002
0180-0010		Federal Tax ID	Emission Inventory	02-25-2004
13-1299890		Shell Chemical Lp Geismar Plant	Federal Tax ID	11-21-1999
LAD003913183		Geismar Pit Permits No	Hazardous Waste Notification	09-02-1983
LAD003913183		WPC File Number	Inactive & Abandoned Sites	08-09-1981
LA0005754		Radioactive Material License	LPDES Permit #	06-25-2003
WP1347		WPC State Permit Number	LWDPS Permit #	06-25-2003
LA-2132-L01		X-Ray Registration Number	Radiation License Number	05-26-1987
2132		Site Id #	Radiation X-ray Registration Number	11-21-1999
G-005-1740		Shell Chemical Co Geismar Works	Solid Waste Facility No.	11-21-1999
17631		Shell Chemical LP - Geismar	TEMPO Merge	01-19-2001
34601		Shell Chemical Co	TEMPO Merge	08-05-2001
38774		Shell Chemical Co	TEMPO Merge	08-05-2001
47981		Shell Chemical Co	TEMPO Merge	03-08-2001
67594		Shell Chemical Co	TEMPO Merge	08-05-2001
0180-0010		Toxic Emissions Data Inventory #	Toxic Emissions Data Inventory #	01-01-1991
70737SHLLCRIVER		TRI #	Toxic Release Inventory	07-19-2004
030008346		UST Facility ID (from UST legacy data)	Underground Storage Tanks	10-11-2002
Physical Location:		7594 Hwy 75 Geismar, LA 70734	Main Phone:	2252016222
Mailing Address:		PO Box 500 Geismar, LA 707340500		
Location of Front Gate:		30° 11' 6" 5 hundredths latitude, 90° 59' 15" 40 hundredths longitude. Coordinate Method: GPS Code (Pseudo Range) Differential, Coordinate Datum: NAD83		
Related People:		Name	Phone (Type)	Relationship
		Mailing Address		
	Anne Adrian	7594 Hwy 75 Geismar, LA 70737	2252016324 (WP)	Water Permit Contact For
	Anne Adrian	7594 Hwy 75 Geismar, LA 70737	2252016324 (WP)	Asbestos Contact for
	Anne Adrian	7594 Hwy 75 Geismar, LA 70737	2252016324 (WP)	Water Billing Party for
	Leo Broering	PO Box 500 Geismar, LA 707340500	2252016456 (WP)	Responsible Official for
	Robert Evans	PO Box 500 Geismar, LA 70734	2252016456 (WP)	Radiation Safety Officer for
	Robert Evans	PO Box 500 Geismar, LA 70734	2252016782 (WP)	Radiation Contact For
	Kathleen Garey	PO Box 500 Geismar, LA 70734	2252016782 (WP)	Accident Prevention Contact for

## General Information

AI ID: 1136 Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

Related People:	Name	Mailing Address	Phone (Type)	Relationship
	Kathleen Garey	PO Box 500 Geismar, LA 70734	2252016482 (WF)	Accident Prevention Contact for
	Greg Kamla	PO Box 500 Geismar, LA 707340500	2252016247 (WP)	Air Permit Contact For
	Keith Miller	PO Box 500 Geismar, LA 70731	2252106247 (WP)	Hazardous Waste Permit Contact For
	Keith Miller	PO Box 500 Geismar, LA 70731	2252016030 (WF)	Hazardous Waste Permit Contact For
	Kris Torberson	PO Box 500 Geismar, LA 70734	2252016328 (WP)	Accident Prevention Billing Party for
	Kris Torberson	PO Box 500 Geismar, LA 70734	2252016030 (WF)	Accident Prevention Billing Party for
Related Organizations:	Name	Address	Phone (Type)	Relationship
	Shell Chemical LP	PO Box 500 Geismar, LA 707340500	2252016247 (WP)	UST Billing Party for
	Shell Chemical LP	PO Box 500 Geismar, LA 707340500	2252016247 (WP)	Owns
	Shell Chemical LP	PO Box 500 Geismar, LA 707340500	2252016247 (WP)	Operates
	Shell Chemical LP	PO Box 500 Geismar, LA 707340500	2252016247 (WP)	Air Billing Party for
	Shell Chemical LP	PO Box 500 Geismar, LA 707340500	2252016247 (WP)	Radiation Registration Billing Party for
	Shell Chemical LP	PO Box 500 Geismar, LA 707340500	2252016247 (WP)	Radiation License Billing Party for
SIC Codes:	2869, Industrial organic chemicals, nec			

Note: This report entitled "General Information" contains a summary of facility-level information contained in LDEQ's TEMPO database for this facility and is not considered a part of the permit. Please review the information contained in this document for accuracy and completeness. If any changes are required or if you have questions regarding this document, you may contact Mr. David Ferrand, Environmental Assistance Division, at (225) 219-3247 or email your changes to facupdate@la.gov.

**INVENTORIES**

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
 Activity Number: PER20050033  
 Permit Number: 2057-V3  
 Air - Title V Regular Permit Renewal

**Subject Item Inventory:**

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
EQT012	01A-85, DEG Rundown Tank T-EG930 (EG-2)	16450.52 gallons		5.45 MM gallons/yr		8760 hr/yr (All Year)
EOT014	01C-85, TEG Rundown Tank T-EG940 (EG-2)	16450.52 gallons		798811 gallons/yr		8760 hr/yr (All Year)
EQT016	02-86, ISOPAR-L Storage Tank T-EO913	93239.21 gallons		839090 gallons/yr		8760 hr/yr (All Year)
EOT019	03-77, EO-2 Cooling Tower W-EO8012/3			15400 gallons/min		8760 hr/yr (All Year)
EQT020	03-91, Lean Absorbent Surge Tank T-EO600	61102 gallons		864768 gallons/yr		8760 hr/yr (All Year)
EQT021	04-91, Brine Surge Tank T-EO633 (EO-2)	10575.34 gallons		26436 gallons/yr		8760 hr/yr (All Year)
EOT022	04A-77, EG Flasher Bottoms Storage T-EG911	57106.81 gallons		28.13 MM gallons/yr		8760 hr/yr (All Year)
EQT023	04B-77, ISOPAR-G Storage T-EO912	57106.81 gallons		513930 gallons/yr		8760 hr/yr (All Year)
EQT024	04C-77, EG Rerun Tank T-EG923 (EG-2)	93239 gallons		1.2 MM gallons/yr		8760 hr/yr (All Year)
EQT025	04D-77, EG Rundown Tank T-EG924 (EG-1)	93239.21 gallons		16.87 MM gallons/yr		8760 hr/yr (All Year)
EQT026	04E-77, EG Rundown Tank T-EG925 (EG-1)	93239.21 gallons		16.87 MM gallons/yr		8760 hr/yr (All Year)
EOT027	04F-77, DEG Rundown Tank T-EG931 (EG-2)	6016.19 gallons		3.63 MM gallons/yr		8760 hr/yr (All Year)
EQT028	04G-77, DEG Rundown Tank T-EG932 (EG-2)	6016.19 gallons		2.07 MM gallons/yr		8760 hr/yr (All Year)
EQT029	04H-77, TEG Rundown Tank T-EG938 (EG-2)	6016 gallons		532541 gallons/yr		8760 hr/yr (All Year)
EQT030	04I-77, TEG Rundown Tank T-EG939 (EG-2)	6016 gallons		532541 gallons/yr		8760 hr/yr (All Year)
EQT033	06-91, Process Analyzers EO-2					175 hr/yr (All Year)
EOT034	10-91 EO-1&2 Brine Surge Tank T-EO810	6016.19 gallons		14664 gallons/yr		8760 hr/yr (All Year)
EQT035	15A2-71, EG Rundown Tank T-EG991 (EG-2)	282008.94 gallons		27.37 MM gallons/yr		8760 hr/yr (All Year)
EQT038	15D2-71, EG Rundown Tank T-EG992 (EG-2)	158630.03 gallons		27.37 MM gallons/yr		8760 hr/yr (All Year)
EQT039	15S3-71, ISOPAR-L Storage T-EO910					8760 hr/yr (All Year)
EQT040	15T1-71, EG Rerun Tank T-EG922 (EG-1)	37014 gallons		1.2 MM gallons/yr		8760 hr/yr (All Year)
EOT041	15U1-71, EG Rundown Tank T-EG920	37014 gallons		11.25 MM gallons/yr		8760 hr/yr (All Year)
EQT042	15V1-71, Carbonate Tank T-EG921 (EO-1/2)	37014 gallons		6.45 MM gallons/yr		8760 hr/yr (All Year)
EQT046	55-87, TEG Bottoms Storage T-EG993 (EG-123)	14893 gallons		714919 gallons/yr		8760 hr/yr (All Year)
EQT047	56-87, TEG Bottoms Storage T-EG994 (EG-123)	20380.79 gallons		714919 gallons/yr		8760 hr/yr (All Year)
EQT048	59A-86, EO Tank Car Vent Absorber C-EO605			1622 lb/hr		1352 hr/yr (All Year)
EQT049	62A-86, EO/EG Backup Gen Driver Y-EO600			415 horsepower		416 hr/yr (All Year)
EQT050	62B-86, Diesel Storage T-EO604	660 gallons		7825 gallons/yr		8760 hr/yr (All Year)
EQT051	104-00, GBF Blms & TEG Blms T/T Load Spot 8			35.56 MM gallons/yr		6570 hr/yr (All Year)
EQT052	04N-77, EO Storage Vessel V-EO986					8760 hr/yr (All Year)
EQT053	04P-77, EO Storage Vessel V-EO988					8760 hr/yr (All Year)
EQT054	04Q-77, EO Storage Vessel V-EO989					8760 hr/yr (All Year)
EQT055	04S-77, EO Storage Vessel V-EO987					8760 hr/yr (All Year)
EQT056	15T3-71, EO Storage Vessel V-EO990					8760 hr/yr (All Year)
EQT057	15U3-71, EO Storage Vessel V-EO991					8760 hr/yr (All Year)
EQT058	15V3-71, EO Storage Vessel V-EO992					8760 hr/yr (All Year)
EQT059	15W3-71, EO Storage Vessel V-EO993					8760 hr/yr (All Year)

**INVENTORIES**

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
 Activity Number: PER20050033  
 Permit Number: 2057-V3  
 Air - Title V Regular Permit Renewal

Subject Item Inventory:	ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
EQT060	15X3-71,EO Storage Vessel V-EO994					8760 hr/yr (All Year)	
EQT061	15Y3-71,EO Storage vessel V-EO995					8760 hr/yr (All Year)	
EQT062	CWHE003, Cooling Water Heat Exchanger E-EO103					8760 hr/yr (All Year)	
EQT063	CWHE004, Cooling Water Heat Exchanger E-EO104					8760 hr/yr (All Year)	
EQT065	CWHE005, Cooling Water Heat Exchanger E-EO105					8760 hr/yr (All Year)	
EQT066	CWHE006, Cooling Water Heat Exchanger E-EO140					8760 hr/yr (All Year)	
EQT067	CWHE007, Cooling Water Heat Exchanger, E-EO143					8760 hr/yr (All Year)	
EQT068	CWHE008, Cooling Water Heat Exchanger E-EO203					8760 hr/yr (All Year)	
EQT069	CWHE012, Cooling Water Heat Exchanger E-EO216					8760 hr/yr (All Year)	
EQT070	CWHE013, Cooling Water Heat Exchanger E-EO220					8760 hr/yr (All Year)	
EQT071	CWHE014, Cooling Water Heat Exchanger E-EO221					8760 hr/yr (All Year)	
EQT072	CWHE024, Cooling Water Heat Exchanger E-EO307					8760 hr/yr (All Year)	
EQT073	CWHE028, Cooling Water Heat Exchanger A-EO608					8760 hr/yr (All Year)	
EQT074	CWHE029, Cooling Water Heat Exchanger A-EO609					8760 hr/yr (All Year)	
EQT075	CWHE030, Cooling Water Heat Exchanger E-EO503					8760 hr/yr (All Year)	
EQT076	CWHE031, Cooling Water Heat Exchanger E-EO504					8760 hr/yr (All Year)	
EQT077	CWHE032, Cooling Water Heat Exchanger E-EO603					8760 hr/yr (All Year)	
EQT078	CWHE033, Cooling Water Heat Exchanger E-EO605					8760 hr/yr (All Year)	
EQT079	CWHE034, Cooling Water Heat Exchanger E-EO606					8760 hr/yr (All Year)	
EQT080	CWHE035, Cooling Water Heat Exchanger E-EO607					8760 hr/yr (All Year)	
EQT081	CWHE036, Cooling Water Heat Exchanger E-EO608					8760 hr/yr (All Year)	
EQT082	CWHE037, Cooling Water Heat Exchanger E-EO616					8760 hr/yr (All Year)	
EQT083	CWHE038, Cooling Water Heat Exchanger E-EO617					8760 hr/yr (All Year)	
EQT084	CWHE039, Cooling Water Heat Exchanger E-EO618					8760 hr/yr (All Year)	
EQT085	CWHE040, Cooling Water Heat Exchanger E-EO619					8760 hr/yr (All Year)	
EQT086	CWHE041, Cooling Water Heat Exchanger E-EO620					8760 hr/yr (All Year)	
EQT087	CWHE042, Cooling Water Heat Exchanger E-EO621					8760 hr/yr (All Year)	
EQT088	CWHE043, Cooling Water Heat Exchanger E-EO622					8760 hr/yr (All Year)	
EQT089	CWHE044, Cooling Water Heat Exchanger E-EO623					8760 hr/yr (All Year)	
EQT090	CWHE045, Cooling Water Heat Exchanger E-EO624					8760 hr/yr (All Year)	
EQT091	CWHE046, Cooling Water Heat Exchanger E-EO625					8760 hr/yr (All Year)	
EQT092	CWHE047, Cooling Water Heat Exchanger E-EO702					8760 hr/yr (All Year)	
EQT093	CWHE048, Cooling Water Heat Exchanger E-EO705					8760 hr/yr (All Year)	
EQT094	CWHE049, Cooling Water Heat Exchanger E-EO706					8760 hr/yr (All Year)	
EQT095	CWHE050, Cooling Water Heat Exchanger E-EO707					8760 hr/yr (All Year)	
EQT096	CWHE051, Cooling Water Heat Exchanger E-EO708					8760 hr/yr (All Year)	
EQT097	CWHE052, Cooling Water Heat Exchanger E-EO709					8760 hr/yr (All Year)	

**INVENTORIES**

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
 Activity Number: PER20050033  
 Permit Number: 2057-V3  
 Air - Title V Regular Permit Renewal

**Subject Item Inventory:**

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
EQT098	CWHE053, Cooling Water Heat Exchanger E-EO712				8760 hr/yr (All Year)	
EQT099	CWHE054, Cooling Water Heat Exchanger E-EO713				8760 hr/yr (All Year)	
EQT100	CWHE055, Cooling Water Heat Exchanger E-EO715				8760 hr/yr (All Year)	
EQT101	CWHE056, Cooling Water Heat Exchanger E-EO716				8760 hr/yr (All Year)	
EQT102	CWHE057, Cooling Water Heat Exchanger E-EO717				8760 hr/yr (All Year)	
EQT103	CWHE058, Cooling Water Heat Exchanger E-EO718				8760 hr/yr (All Year)	
EQT104	CWHE059, Cooling Water Heat Exchanger E-EO202				8760 hr/yr (All Year)	
EQT105	CWHE060, Cooling Water Heat Exchanger EG-1				8760 hr/yr (All Year)	
EQT106	CWHE061, Cooling Water Heat Exchanger EG-2				8760 hr/yr (All Year)	
EQT107	CWHE062, Cooling Water Heat Exchanger EOEG 12				8760 hr/yr (All Year)	
EQT108	NNN-01, Column C-EG720				8760 hr/yr (All Year)	
EQT109	NNN-46, Column C-EG503				8760 hr/yr (All Year)	
EQT110	PWW-04, Process Wastewater V-EO205				8760 hr/yr (All Year)	
EQT111	PWW-05, Process Wastewater V-EO303A				8760 hr/yr (All Year)	
EQT112	PWW-06, Process Wastewater V-EO202				8760 hr/yr (All Year)	
EQT113	PWW-07, Process Wastewater V-EO201				8760 hr/yr (All Year)	
EQT114	PWW-08, W-EO101 Blowdown				8760 hr/yr (All Year)	
EQT115	PWW-09, Process Wastewater V-EO605				8760 hr/yr (All Year)	
EQT116	PWW-10, Process Wastewater V-EG505				8760 hr/yr (All Year)	
EQT117	PWW-11, Process Wastewater V-EG801				8760 hr/yr (All Year)	
EQT118	PWW-12, Process Wastewater V-EG741				8760 hr/yr (All Year)	
EQT119	PWW-22, EO2 Oxidizer KO Pot				8760 hr/yr (All Year)	
EQT120	PV-04, Process Vent K-EO601				8760 hr/yr (All Year)	
EQT121	PV-05, Process Vent K-EO604				8760 hr/yr (All Year)	
EQT122	PV-06, Process Vent K-EO303A				8760 hr/yr (All Year)	
EQT123	PV-07, Process Vent K-EO703				8760 hr/yr (All Year)	
EQT124	PV-15, Process Vent K-EO605				8760 hr/yr (All Year)	
EQT125	60-86, Flasher Tops Accum V-EG731				8760 hr/yr (All Year)	
FUG003	55C-88, Fugitive Emissions EO2				8760 hr/yr (All Year)	
FUG004	55D-88, Fugitive Emissions EG2				8760 hr/yr (All Year)	
FUG005	55E-88, Fugitive Emissions EO/EG Tank Farm				8760 hr/yr (All Year)	
RLP028	17-96, A-EG502 Contaminated Steam Vent				850 hr/yr (All Year)	
RLP031	12-96, EO-2 Sour Oil Gas Vent K-EO601 to atm				175 hr/yr (All Year)	
RLP034	23A-96, EG-2 Hotwell Vent V-EG801				8760 hr/yr (All Year)	
RLP035	26-98, EG2 GBF/Purif Vac Aftercond Vent E-EG801				8760 hr/yr (All Year)	
RLP036	27-98, EG2 DEG Col Vac Aftercond Vent E-EG803				8760 hr/yr (All Year)	
RLP037	41-91, EO Effl Pretreat Fd Tk Scrub Vent C-EO620	5875 gallons			8760 hr/yr (All Year)	

## INVENTORIES

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### Subject Item Inventory:

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
RLP039	64-86, EO2 700 Vent			500 lb/hr		8760 hr/yr (All Year)
RLP041	97-00, EO-2 Oxidizer Vent					8760 hr/yr (All Year)

### Subject Item Groups:

ID	Description	Included Components (from Above)
GRP017	Routed to Vent Absorbers EO605/705	EQT61 15V3-71, EO Storage vessel V-EO995
GRP017	Routed to Vent Absorbers EO605/705	EQT52 04N-77, EO Storage Vessel V-EO986
GRP017	Routed to Vent Absorbers EO605/705	EQT53 04P-77, EO Storage Vessel V-EO988
GRP017	Routed to Vent Absorbers EO605/705	EQT55 04S-77, EO Storage Vessel V-EO987
GRP017	Routed to Vent Absorbers EO605/705	EQT58 15V3-71, EO Storage Vessel V-EO992
GRP017	Routed to Vent Absorbers EO605/705	EQT57 15U3-71, EO Storage Vessel V-EO991
GRP017	Routed to Vent Absorbers EO605/705	EQT56 15T3-71, EO Storage Vessel V-EO990
GRP017	Routed to Vent Absorbers EO605/705	EQT54 04Q-77, EO Storage Vessel V-EO989
GRP017	Routed to Vent Absorbers EO605/705	EQT59 15W3-71, EO Storage Vessel V-EO993
GRP018	Routed to Flare 3-73 in Permit No. 2669-V1	EQT60 15X3-71, EO Storage Vessel V-EO994
GRP018	Routed to Flare 3-73 in Permit No. 2669-V1	EQT33 06-91, Process Analyzers EO-2
GRP018	Routed to Flare 3-73 in Permit No. 2669-V1	EQT108 NNN-01, Column C-EG720
GRP018	Routed to Flare 3-73 in Permit No. 2669-V1	EQT122 PV-06, Process Vent K-EO303A
GRP018	Routed to Flare 3-73 in Permit No. 2669-V1	EQT123 PV-07, Process Vent K-EO703
GRP018	Routed to Flare 3-73 in Permit No. 2669-V1	EQT125 60-86, Flasher Tops Accum V-EG731
GRP019	Routed to Boilers, Emission Points 01A-71 and 01B-71 in Permit No. 2728-V0 or to Thermal Oxidizer 97-00	EQT120 PV-04, Process Vent K-EO601
GRP019	Routed to Boilers, Emission Points 01A-71 and 01B-71 in Permit No. 2728-V0 or to Thermal Oxidizer 97-00	EQT121 PV-05, Process Vent K-EO504
GRP028	EOEG-2 Facility	EQT12 01A-85, DEG Rundown Tank T-EG930 (EG-2)
GRP028	EOEG-2 Facility	EQT14 01C-85, TEG Rundown Tank T-EG940 (EG-2)
GRP028	EOEG-2 Facility	EQT16 02-86, ISOPAR-L Storage Tank T-EO913
GRP028	EOEG-2 Facility	EQT19 03-77, EO-2 Cooling Tower W-EO601/2/3
GRP028	EOEG-2 Facility	EQT20 03-91, Lean Absorbent Surge Tank T-EO600
GRP028	EOEG-2 Facility	EQT21 04-91, Brine Surge Tank T-EO633 (EO-2)
GRP028	EOEG-2 Facility	EQT22 04A-77, EG Flasher Bottoms Storage T-EG911
GRP028	EOEG-2 Facility	EQT23 04B-77, ISOPAR-G Storage T-EO912
GRP028	EOEG-2 Facility	EQT24 04C-77, EG Rerun Tank T-EG923 (EG-2)
GRP028	EOEG-2 Facility	EQT25 04D-77, EG Rundown Tank T-EG924 (EG-1)
GRP028	EOEG-2 Facility	EQT26 04E-77, EG Rundown Tank T-EG925 (EG-1)
GRP028	EOEG-2 Facility	EQT27 04F-77, DEG Rundown Tank T-EC931 (EG-2)
GRP028	EOEG-2 Facility	EQT28 04G-77, DEG Rundown Tank T-EG932 (EG-2)
GRP028	EOEG-2 Facility	EQT29 04H-77, TEG Rundown Tank T-EG938 (EG-2)

**INVENTORIES**

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
 Activity Number: PER20050033  
 Permit Number: 2057-V3  
 Air - Title V Regular Permit Renewal

**Subject Item Groups:**

ID	Description	Included Components (from Above)
GRP028	EOEG-2 Facility	EQT30 04I-77, TEG Rundown Tank T-EG939(EG-2)
GRP028	EOEG-2 Facility	EQT33 06-91, Process Analyzers EO-2
GRP028	EOEG-2 Facility	EQT34 10-91, EO-1&2 Brine Surge Tank T-EO810
GRP028	EOEG-2 Facility	EQT35 15A2-71, EG Rundown Tank T-EG991 (EG-2)
GRP028	EOEG-2 Facility	EQT38 15D2-71, EG Rundown Tank T-EG992 (EG-2)
GRP028	EOEG-2 Facility	EQT39 15S3-71, ISOPAR-L Storage T-EO910
GRP028	EOEG-2 Facility	EQT40 15T1-71, EG Rerun Tank T-EG922 (EG-1)
GRP028	EOEG-2 Facility	EQT41 15U1-71, EG Rundown Tank T-EG920
GRP028	EOEG-2 Facility	EQT42 15V1-71, Carbonate Tank T-EG921 (EO-1/2)
GRP028	EOEG-2 Facility	EQT46 55-87, TEG Bottoms Storage T-EG993 (EG-1/3)
GRP028	EOEG-2 Facility	EQT47 56-87, TEG Bottoms Storage T-EG994 (EG-1/3)
GRP028	EOEG-2 Facility	EQT48 59A-86, EO Tank Car Vent Absorber C-EO605
GRP028	EOEG-2 Facility	EQT49 62A-88, EO/EG Backup Gen Driver Y-EO600
GRP028	EOEG-2 Facility	EQT50 62B-88, Diesel Storage T-EO604
GRP028	EOEG-2 Facility	EQT51 104-00, GBF Btms & TEG Btms T/T Load Spot 8
GRP028	EOEG-2 Facility	EQT52 04N-77, EO Storage Vessel V-EO986
GRP028	EOEG-2 Facility	EQT53 04P-77, EO Storage Vessel V-EO988
GRP028	EOEG-2 Facility	EQT54 04Q-77, EO Storage Vessel V-EO989
GRP028	EOEG-2 Facility	EQT55 04S-77, EO Storage Vessel V-EO987
GRP028	EOEG-2 Facility	EQT56 15T3-71, EO Storage Vessel V-EO990
GRP028	EOEG-2 Facility	EQT57 15U3-71, EO Storage Vessel V-EO991
GRP028	EOEG-2 Facility	EQT58 15V3-71, EO Storage Vessel V-EO992
GRP028	EOEG-2 Facility	EQT59 15W3-71, EO Storage Vessel V-EO993
GRP028	EOEG-2 Facility	EQT60 15X3-71, EO Storage Vessel V-EO994
GRP028	EOEG-2 Facility	EQT61 15Y3-71, EO Storage Vessel V-EO995
GRP028	EOEG-2 Facility	EQT62 CWHE003, Cooling Water Heat Exchanger E-E0103
GRP028	EOEG-2 Facility	EQT63 CWHE004, Cooling Water Heat Exchanger E-E0104
GRP028	EOEG-2 Facility	EQT65 CWHE005, Cooling Water Heat Exchanger E-E0105
GRP028	EOEG-2 Facility	EQT66 CWHE006, Cooling Water Heat Exchanger E-E0140
GRP028	EOEG-2 Facility	EQT67 CWHE007, Cooling Water Heat Exchanger E-E0143
GRP028	EOEG-2 Facility	EQT68 CWHE008, Cooling Water Heat Exchanger E-E0203
GRP028	EOEG-2 Facility	EQT69 CWHE012, Cooling Water Heat Exchanger E-E0216
GRP028	EOEG-2 Facility	EQT70 CWHE013, Cooling Water Heat Exchanger E-E0220
GRP028	EOEG-2 Facility	EQT71 CWHE014, Cooling Water Heat Exchanger E-E0221
GRP028	EOEG-2 Facility	EQT72 CWHE024, Cooling Water Heat Exchanger E-E0307
GRP028	EOEG-2 Facility	EQT73 CWHE028, Cooling Water Heat Exchanger A-E0608
GRP028	EOEG-2 Facility	EQT74 CWHE029, Cooling Water Heat Exchanger A-E0609

**INVENTORIES**

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
 Activity Number: PER20050033  
 Permit Number: 2057-V3  
 Air - Title V Regular Permit Renewal

**Subject Item Groups:**

ID	Description	Included Components (from Above)
GRP028	EOEG-2 Facility	EQT75 CWHE030, Cooling Water Heat Exchanger E-E0503
GRP028	EOEG-2 Facility	EQT76 CWHE031, Cooling Water Heat Exchanger E-E0504
GRP028	EOEG-2 Facility	EQT77 CWHE032, Cooling Water Heat Exchanger E-E0603
GRP028	EOEG-2 Facility	EQT78 CWHE033, Cooling Water Heat Exchanger E-E0605
GRP028	EOEG-2 Facility	EQT79 CWHE034, Cooling Water Heat Exchanger E-E0606
GRP028	EOEG-2 Facility	EQT80 CWHE035, Cooling Water Heat Exchanger E-E0607
GRP028	EOEG-2 Facility	EQT81 CWHE036, Cooling Water Heat Exchanger E-E0608
GRP028	EOEG-2 Facility	EQT82 CWHE037, Cooling Water Heat Exchanger E-E0616
GRP028	EOEG-2 Facility	EQT83 CWHE038, Cooling Water Heat Exchanger E-E0617
GRP028	EOEG-2 Facility	EQT84 CWHE039, Cooling Water Heat Exchanger E-E0618
GRP028	EOEG-2 Facility	EQT85 CWHE040, Cooling Water Heat Exchanger E-E0619
GRP028	EOEG-2 Facility	EQT86 CWHE041, Cooling Water Heat Exchanger E-E0620
GRP028	EOEG-2 Facility	EQT87 CWHE042, Cooling Water Heat Exchanger E-E0621
GRP028	EOEG-2 Facility	EQT88 CWHE043, Cooling Water Heat Exchanger E-E0622
GRP028	EOEG-2 Facility	EQT89 CWHE044, Cooling Water Heat Exchanger E-E0623
GRP028	EOEG-2 Facility	EQT90 CWHE045, Cooling Water Heat Exchanger E-E0624
GRP028	EOEG-2 Facility	EQT91 CWHE046, Cooling Water Heat Exchanger E-E0625
GRP028	EOEG-2 Facility	EQT92 CWHE047, Cooling Water Heat Exchanger E-E0702
GRP028	EOEG-2 Facility	EQT93 CWHE048, Cooling Water Heat Exchanger E-E0705
GRP028	EOEG-2 Facility	EQT94 CWHE049, Cooling Water Heat Exchanger E-E0706
GRP028	EOEG-2 Facility	EQT95 CWHE050, Cooling Water Heat Exchanger E-E0707
GRP028	EOEG-2 Facility	EQT96 CWHE051, Cooling Water Heat Exchanger E-E0708
GRP028	EOEG-2 Facility	EQT97 CWHE052, Cooling Water Heat Exchanger E-E0709
GRP028	EOEG-2 Facility	EQT98 CWHE053, Cooling Water Heat Exchanger E-E0712
GRP028	EOEG-2 Facility	EQT99 CWHE054, Cooling Water Heat Exchanger E-E0713
GRP028	EOEG-2 Facility	EQT100 CWHE055, Cooling Water Heat Exchanger E-E0715
GRP028	EOEG-2 Facility	EQT101 CWHE056, Cooling Water Heat Exchanger E-E0716
GRP028	EOEG-2 Facility	EQT102 CWHE057, Cooling Water Heat Exchanger E-E0717
GRP028	EOEG-2 Facility	EQT103 CWHE058, Cooling Water Heat Exchanger E-E0718
GRP028	EOEG-2 Facility	EQT104 CWHE059, Cooling Water Heat Exchanger E-E0202
GRP028	EOEG-2 Facility	EQT105 CWHE060, Cooling Water Heat Exchanger EG-1
GRP028	EOEG-2 Facility	EQT106 CWHE061, Cooling Water Heat Exchanger EG-2
GRP028	EOEG-2 Facility	EQT107 CWHE062, Cooling Water Heat Exchanger EG-12
GRP028	EOEG-2 Facility	EQT108 NNN-01, Column C-EG720
GRP028	EOEG-2 Facility	EQT109 NNN-46, Column C-EG503
GRP028	EOEG-2 Facility	EQT110 PWW-04, Process Wastewater V-EO205
GRP028	EOEG-2 Facility	EQT111 PWW-05, Process Wastewater V-EO303A

INVENTORIES

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

## Subject Item Groups:

ID	Description	Included Components (from Above)
GRP028	EOEG-2 Facility	EQT112 PWW-06, Process Wastewater V-EO202
GRP028	EOEG-2 Facility	EQT113 PWW-07, Process Wastewater V-EO201
GRP028	EOEG-2 Facility	EQT114 PWW-08, W-EO101 Blowdown
GRP028	EOEG-2 Facility	EQT115 PWW-09, Process Wastewater V-EO605
GRP028	EOEG-2 Facility	EQT116 PWW-10, Process Wastewater V-EG505
GRP028	EOEG-2 Facility	EQT117 PWW-11, Process Wastewater V-EG801
GRP028	EOEG-2 Facility	EQT118 PWW-12, Process Wastewater V-EG741
GRP028	EOEG-2 Facility	EQT119 PWW-22, EO2 Oxidizer KO Pot
GRP028	EOEG-2 Facility	EQT120 PV-04, Process Vent K-EO601
GRP028	EOEG-2 Facility	EQT121 PV-05, Process Vent K-EO604
GRP028	EOEG-2 Facility	EQT122 PV-06, Process Vent K-EO303A
GRP028	EOEG-2 Facility	EQT123 PV-07, Process Vent K-EO703
GRP028	EOEG-2 Facility	EQT124 PV-15, Process Vent K-EO605
GRP028	EOEG-2 Facility	EQT125 60-86, Flasher Tops Accum V-EG731
GRP028	EOEG-2 Facility	FUG3 55C-88, Fugitive Emissions EO2
GRP028	EOEG-2 Facility	FUG4 55D-88, Fugitive Emissions EG2
GRP028	EOEG-2 Facility	FUG5 55E-88, Fugitive Emissions EO/EG Tank Farm
GRP028	EOEG-2 Facility	RLP28 17-96, A-EG502 Contaminated Steam Vent
GRP028	EOEG-2 Facility	RLP31 20-96, EO-2 Sour Oil Gas Vent K-EO601 to atm
GRP028	EOEG-2 Facility	RLP34 23A-96, EG-2 Hotwell Vent V-EG801
GRP028	EOEG-2 Facility	RLP35 26-98, EG2 GBF/Purif Vac Aftercond Vent E-EG801
GRP028	EOEG-2 Facility	RLP36 27-98, EG2 DEG Col Vac Aftercond Vent E-EG803
GRP028	EOEG-2 Facility	RLP37 41-91, EO Effi Preheat Fd Tk Scrub Vent C-EO620
GRP028	EOEG-2 Facility	RLP39 64-86, EO2 700 Vent
GRP028	EOEG-2 Facility	RLP41 97-00, EO-2 Oxidizer Vent
GRP029	Routed to Plant Biotreater in Permit No. 2136-V2	EQT110 PWW-04, Process Wastewater V-EO205
GRP029	Routed to Plant Biotreater in Permit No. 2136-V2	EQT111 PWW-05, Process Wastewater V-EO303A
GRP029	Routed to Plant Biotreater in Permit No. 2136-V2	EQT112 PWW-06, Process Wastewater V-EO202
GRP029	Routed to Plant Biotreater in Permit No. 2136-V2	EQT113 PWW-07, Process Wastewater V-EO201
GRP029	Routed to Plant Biotreater in Permit No. 2136-V2	EQT114 PWW-08, W-EO101 Blowdown
GRP029	Routed to Plant Biotreater in Permit No. 2136-V2	EQT115 PWW-09, Process Wastewater V-EO605
GRP029	Routed to Plant Biotreater in Permit No. 2136-V2	EQT116 PWW-10, Process Wastewater V-EG505
GRP029	Routed to Plant Biotreater in Permit No. 2136-V2	EQT117 PWW-11, Process Wastewater V-EG801
GRP029	Routed to Plant Biotreater in Permit No. 2136-V2	EQT118 PWW-12, Process Wastewater V-EG741
GRP029	Routed to Plant Biotreater in Permit No. 2136-V2	EQT119 PWW-22, EO2 Oxidizer KO Pot

Relationships:

**INVENTORIES**

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
 Activity Number: PER20050033  
 Permit Number: 2057-V3  
 Air - Title V Regular Permit Renewal

Stack Information:

ID	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)	Temperature (°F)
EQT012 01A-85, DEG Rundown Tank T-EG930 (EG-2)					28	
EQT014 01C-85, TEG Rundown Tank T-EG940 (EG-2)					28	
EQT016 02-86, ISOPAR-L Storage Tank T-EO913					30	
EQT019 03-77, EO-2 Cooling Tower W-EO601/2/3	30.5	465000	18	.5	60	140
EQT020 03-91, Lean Absorbent Surge Tank T-EO600					26	77
EQT021 04-91, Brine Surge Tank T-EO633 (EO-2)			.5		18	57
EQT022 04A-77, EG Flasher Bottoms Storage T-EG911					30	
EQT023 04B-77, ISOPAR-G Storage T-EO912					30	
EQT024 04C-77, EG Rerun Tank T-EG923 (EG-2)					30	
EQT025 04D-77, EG Rundown Tank T-EG924 (EG-1)					30	
EQT026 04E-77, EG Rundown Tank T-EG925 (EG-1)					30	
EQT027 04F-77, DEG Rundown Tank T-EG931 (EG-2)					16	
EQT028 04G-77, DEG Rundown Tank T-EG932 (EG-2)					16	
EQT029 04H-77, TEG Rundown Tank T-EG938 (EG-2)					16	
EQT030 04I-77, TEG Rundown Tank T-EG939 (EG-2)					16	
EQT033 06-91, Process Analyzers EO-2	12	3.6	.08		20	
EQT034 10-91, EO-1&2 Brine Surge Tank T-EO810					16	
EQT035 15A2-71, EG Rundown Tank T-EG991 (EG-2)					30	
EQT038 15D2-71, EG Rundown Tank T-EG992 (EG-2)					30	
EQT039 15S3-71, ISOPAR-L Storage T-EO910					24	
EQT040 15T1-71, EG Rerun Tank T-EG922 (EG-1)					28	
EQT041 15U1-71, EG Rundown Tank T-EG920					28	
EQT042 15V1-71, Carbonate Tank T-EG921 (EO-1/2)					28	
EQT046 55-87, TEG Bottoms Storage T-EG993 (EG-123)					21	
EQT047 56-87, TEG Bottoms Storage T-EG994 (EG-123)					24	
EQT048 59A-86, EO Tank Car Vent Absorber C-EO905	6.01	195	.83		70	85
EQT049 62A-BB, EO/EG Backup Gen Driver Y-EO600	42.8	1292	.8		15	880
EQT050 62B-BB, Diesel Storage T-EO604					10	
RLP028 17-96, A-EG502 Contaminated Steam Vent	117	3800	.83		100	200
RLP031 20-96, EO-2 Sour Oil Gas Vent K-EO601 to atm	1.2	57	1		200	200
RLP034 23A-96, EG-2 Hotwell Vent V-EG801		.01	.33		20	100
RLP035 26-98, EG2 GBF/Purif Vac Aftercond Vent E-EG801	7.5	41	.17		43	109
RLP036 27-98, EG2 DEG Col Vac Aftercond Vent E-EG803	33	40	.08		43	98
RLP037 41-91, EO Effl Prereat Fd Tk Scrub Vent C-EO620	1	16	.17		20	90
RLP039 64-86, EO2 700 Vent	11.3	477	.3		70	90
RLP041 97-00, EO-2 Oxidizer Vent	51	23400	3.1		50	282

Fee Information:

Subj Item Id	Multiplier	Units Of Measure	Fee Desc
GRP028	79	MM Lb/Yr	0630 - Organic Oxides, Alcohols, Glycols (Rated Capacity)

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## EMISSION RATES FOR CRITERIA POLLUTANTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### All phases

Subject Item	PM <sub>10</sub>		SO <sub>2</sub>		NOx		CO		VOC		Tons/Year	
	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	
RLP 036 27-98												0.002
RLP 037 41-81												0.05
RLP 039 84-86												0.01
RLP 041 97-90	0.02	0.02	0.10	0.002	0.002	0.01	0.33	1.35	1.33	2.45	104.69	10.72
												48.17
												8.69

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals

### Permit Phase Totals:

PM10: 1718 tons/yr

SO2: 0.19 tons/yr

NOx: 4.10 tons/yr

CO: 12.29 tons/yr

VOC: 47.03 tons/yr

### Emission Rates Notes:



**EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS**

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

**All phases**

Subject Item	Avg lb/hr	Max lb/hr	Tons/Year
EQT 020 03-91	0.01	-	0.04
EQT 021 04-91	-	-	-
EQT 022 04A-77	-	-	-
EQT 024 04C-77	-	-	-
EQT 025 04D-77	-	-	-
EQT 026 04E-77	-	-	-
EQT 033 06-91	0.003	-	0.01
EQT 034 10-91	-	-	-
EQT 035 15A2-71	-	-	-
EQT 038 15D2-71	-	-	-
EQT 040 15T1-71	-	-	-
EQT 041 15U1-71	-	-	-
EQT 042 15V1-71	-	-	-
EQT 048 59A-86	-	-	-
EQT 051 164-00	-	-	0.05
FUG 003 55C-88	0.01	-	-
FUG 004 55D-88	-	-	-
FUG 005 55E-88	0.18	-	0.81

## EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### All phases

Subject Item	Acetaldehyde			Allyl chloride			Ethylene glycol			Ethylene oxide			Formaldehyde		
	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
RLP 028 17-96	0.75	3.20	0.32	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
RLP 031 20-96															
RLP 034 23A-96															
RLP 035 26-98	0.01	0.01	0.03	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
RLP 036 27-98															
RLP 037 41-91	0.001	0.50	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
RLP 039 64-96	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.002
RLP 041 97-00	0.21	9.13	0.92							0.16	6.85	0.69	0.26	11.42	1.15

## EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### All phases

Subject Item	Avg lb/hr	Max lb/hr	Tons/Year
RLP 028 17-96			
<b>RLP 031</b> 20-96			
RLP 034 23A-96			
RLP 035 26-98			
RLP 036 27-98			
RLP 037 41-91			
RLP 039 64-86			
<b>RLP 041</b> 97-00			

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals

### Permit Parameter Totals:

Acetaldehyde: 1.33 tons/yr  
Allyl chloride: 0.04 tons/yr  
Ethylene glycol: 8.72 tons/yr  
Ethylene oxide: 3.71 tons/yr  
Formaldehyde: 0.20 tons/yr  
Methanol: 0.91 tons/yr

### Emission Rates Notes:

## **SPECIFIC REQUIREMENTS**

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **EQT019 03-77, EO-2 Cooling Tower W-EO601/2/3**

1 Do not use chromium-based water treatment chemicals in any affected IPCT. Subpart Q. [40 CFR 63.402]

### **EQT020 03-91, Lean Absorbent Surge Tank T-EQ0600**

- 2 Permittee shall comply with all the applicable requirements of LAC 33:III.Chapter 51. NESHAP, 40 CFR 63. Subpart G is determined as MACT. Fixed roof tank contains process water with less than 1000 ppm of Table 9 OHAPs, no further controls required as per 40 CFR 63.149(e)(2). [LAC 33:III.5109.A]
- 3 Comply with the provisions of 40 CFR 63 Subpart G Table 35 for each item of equipment meeting all the criteria specified in 40 CFR 63.149(b) through (d) and either (e)(1) or (e)(2). Subpart G. [40 CFR 63.149(a)]

### **EQT021 04-91, Brine Surge Tank T-EQ0633 (EO-2)**

- 4 Equip with a submerged fill pipe. [LAC 33:III.2103.A]
- 5 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]
- 6 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable. [LAC 33:III.2103.I.]
- 7 Emits Class III toxic air pollutants. No MACT is required. [LAC 33:III.5109.A]
- 8 Shall comply with all the applicable requirements of 40 CFR 63.149(e)(2). Complies with Table 35 requirements. Subpart G. [40 CFR 63.149(e)(2)]

### **EQT022 04A-77, EG Flasher Bottoms Storage T-EG911**

- 9 Emits Class II toxic air pollutants. No MACT is required. [LAC 33:III.5109.A]
- 10 Group 2 Tank: Permittee shall keep accessible records showing the capacity of the storage vessel. Volume recordkeeping by logbook at no required frequency. [40 CFR 63.119(a)(3), 40 CFR 63.123(a)]
- 11 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]

### **EQT024 04C-77, EG Rerun Tank T-EG923 (EG-2)**

- 12 Emits Class III toxic air pollutants. No MACT is required. [LAC 33:III.5109.A]
- 13 Group 2 Tank: Permittee shall keep accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Volume recordkeeping by logbook at no required frequency. [40 CFR 63.119(a)(3), 40 CFR 63.123(a)]

### **EQT025 04D-77, EG Rundown Tank T-EG924 (EG-1)**

- 14 Emits Class III toxic air pollutants. No MACT is required. [LAC 33:III.5109.A]
- 15 Group 2 Tank: Permittee shall keep accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Volume recordkeeping by logbook at no required frequency. [40 CFR 63.119(a)(3), 40 CFR 63.123(a)]

### **EQT026 04E-77, EG Rundown Tank T-EG925 (EG-1)**

- 16 Emits Class III toxic air pollutants. No MACT is required. [LAC 33:III.5109.A]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### EQT026 04E-77, EG Rundown Tank T-EG925 (EG-1)

17 Group 2 Tank: Permittee shall keep accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Volume recordkeeping by logbook at no required frequency. [40 CFR 63.119(a)(3), 40 CFR 63.123(a)]

### EQT033 06-91, Process Analyzers EO-2

18 Shall comply with all the applicable requirements of LAC 33.III.Chapter 5. Compliance with SOCM1 HON is considered compliance with the MACT requirements of LAC 33.III.5109. [LAC 33.III.5109]  
19 Pressure relief device in gas/vapor service: Organic HAP < 500 ppm above background except during pressure releases, as determined by the method specified in 63.180(c). Subpart H. [40 CFR 63.165(a)]

WHICH MONTHS: All Year Statistical Basis: None specified

20 Sampling connection systems: Equip with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 63.162(b). Operate the system as specified in 40 CFR 63.166(b). Subpart H. [40 CFR 63.166]  
21 Permittee shall use a flare as a control device and shall comply with all the applicable requirements of 40 CFR 63.172(d) and 63.11(b). [40 CFR 63.172(d)]  
22 Comply with the test methods and procedures requirements provided in 40 CFR 63.180. Subpart H. [40 CFR 63.180]

### EQT034 10-91, EO-1&2 Brine Surge Tank T-EO810

23 Equip with a submerged fill pipe. [LAC 33.III.2103.A]  
24 Determine VOC maximum true vapor pressure using the methods in LAC 33.III.2103.H.3.a-e. [LAC 33.III.2103.H.3]  
25 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33.III.2103.I.1 - 7, as applicable. [LAC 33.III.2103.I]  
26 Emits Class III toxic air pollutants. No MACT is required. [LAC 33.III.5109.A]  
27 Shall comply with all the applicable requirements of 40 CFR 63.149(e)(2). Complies with Table 35 requirements. Subpart G. [40 CFR 63.149(e)(2)]

### EQT035 15A2-71, EG Rundown Tank T-EG991 (EG-2)

28 Emits Class III toxic air pollutants. No MACT is required. [LAC 33.III.5107, LAC 33.III.5109.A]  
29 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]

### EQT038 15D2-71, EG Rundown Tank T-EG992 (EG-2)

30 Emits Class III toxic air pollutants. No MACT is required. [LAC 33.III.5107, LAC 33.III.5109.A]  
31 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]

### EQT040 15T1-71, EG Rerun Tank T-EG922 (EG-1)

32 Emits Class III toxic air pollutants. No MACT is required. [LAC 33.III.5107, LAC 33.III.5109.A]  
33 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### EQT041 15U1-71, EG Rundown Tank T-EG920

- 34 Emits Class III toxic air pollutants. No MACT is required. [LAC 33:III.5107, LAC 33:III.5109.A]  
35 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]

### EQT048 59A-86, EO Tank Car Vent Absorber C-EO605

- 36 VOC, Total  $\geq$  90 % DRE. [LAC 33:III.2107.B]  
Which Months: All Year Statistical Basis: None specified  
37 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2107.D-4. [LAC 33:III.2107.D]  
38 Determine compliance with LAC 33:III.2107.B using the methods in LAC 33:III.2107.E.1 through 5, as appropriate. [LAC 33:III.2107.E]  
39 Equipment/operational data recordkeeping by electronic or hard copy as needed. Maintain records to demonstrate that the criteria are being met for any exemption claimed. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request. [LAC 33:III.2115.K]  
40 Permittee shall maintain the EO removal efficiency of 99 percent or greater. Determined as MACT. [LAC 33:III.5109.A]

### EQT049 62A-88, EO/EG Backup Gen Driver Y-EO600

- 41 Opacity  $\leq$  20 percent, except during the cleaning of a fire box or building of a new fire, soot blowing or lancing, charging of an incinerator, equipment changes, ash removal or rapping of precipitators, which may have an opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. [LAC 33:III.1101.B]  
Which Months: All Year Statistical Basis: None specified  
42 Opacity  $\leq$  20 percent; except emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. [LAC 33:III.1311.C]  
Which Months: All Year Statistical Basis: Six-minute average

### EQT051 104-00, GBF Btms & TEG Btms TT Load Spot 8

- 43 Emits Class III toxic air pollutants. No MACT is required. [LAC 33:III.5107, LAC 33:III.5109.A]  
44 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in 40 CFR 63.130(h)(1) through (h)(3). Subpart G. [40 CFR 63.130(f)]

### EQT052 04N-77, EO Storage Vessel V-EO986

- 45 Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere. [LAC 33:III.2103.F]  
46 Equip with a submerged fill pipe. [LAC 33:III.2103.F]  
47 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3-a-e. [LAC 33:III.2103.H.3]  
48 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable. [LAC 33:III.2103.I]  
49 Emissions controlled by absorbers C-EO605 and C-EO705 with 95% efficiency. [LAC 33:III.5109.A]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### EQT053      04P-77, EO Storage Vessel V-EQ0988

- 50 Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere. [LAC 33:III.2103.F]
- 51 Equip with a submerged fill pipe. [LAC 33:III.2103.F]
- 52 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]
- 53 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7 as applicable. [LAC 33:III.2103.I.]
- 54 Emissions controlled by absorbers C-EQ0605 and C-EQ0705 with 95% efficiency. [LAC 33:III.5109.A]

### EQT054      04Q-77, EO Storage Vessel V-EQ0989

- 55 Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere. [LAC 33:III.2103.F]
- 56 Equip with a submerged fill pipe. [LAC 33:III.2103.F]
- 57 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]
- 58 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7 as applicable. [LAC 33:III.2103.I.]
- 59 Emissions controlled by absorbers C-EQ0605 and C-EQ0705 with 95% efficiency. [LAC 33:III.5109.A]

### EQT055      04S-77, EO Storage Vessel V-EQ0987

- 60 Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere. [LAC 33:III.2103.F]
- 61 Equip with a submerged fill pipe. [LAC 33:III.2103.F]
- 62 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]
- 63 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7 as applicable. [LAC 33:III.2103.I.]
- 64 Emissions controlled by absorbers C-EQ0605 and C-EQ0705 with 95% efficiency. [LAC 33:III.5109.A]

### EQT056      15T3-71, EO Storage Vessel V-EQ0990

- 65 Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere. [LAC 33:III.2103.F]
- 66 Equip with a submerged fill pipe. [LAC 33:III.2103.F]
- 67 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]
- 68 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7 as applicable. [LAC 33:III.2103.I.]
- 69 Emissions controlled by absorbers C-EQ0605 and C-EQ0705 with 95% efficiency. [LAC 33:III.5109.A]

### EQT057      15U3-71, EO Storage Vessel V-EQ0991

- 70 Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere. [LAC 33:III.2103.F]
- 71 Equip with a submerged fill pipe. [LAC 33:III.2103.F]
- 72 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]

## **SPECIFIC REQUIREMENTS**

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **EQT057      15U3-71, EO Storage Vessel V-EO991**

- 73 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable. [LAC 33:III.2103.I]
- 74 Emissions controlled by absorbers C-EO605 and C-EO705 with 95% efficiency. [LAC 33:III.5109.A]

### **EQT058      15V3-71, EO Storage Vessel V-EO992**

- 75 Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere. [LAC 33:III.2103.F]
- 76 Equip with a submerged fill pipe. [LAC 33:III.2103.F]
- 77 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]
- 78 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable. [LAC 33:III.2103.I]
- 79 Emissions controlled by absorbers C-EO605 and C-EO705 with 95% efficiency. [LAC 33:III.5109.A]

### **EQT059      15W3-71, EO Storage Vessel V-EO993**

- 80 Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere. [LAC 33:III.2103.F]
- 81 Equip with a submerged fill pipe. [LAC 33:III.2103.F]
- 82 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]
- 83 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable. [LAC 33:III.2103.I]
- 84 Emissions controlled by absorbers C-EO605 and C-EO705 with 95% efficiency. [LAC 33:III.5109.A]

### **EQT060      15X3-71, EO Storage Vessel V-EO994**

- 85 Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere. [LAC 33:III.2103.F]
- 86 Equip with a submerged fill pipe. [LAC 33:III.2103.F]
- 87 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]
- 88 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable. [LAC 33:III.2103.I]
- 89 Emissions controlled by absorbers C-EO605 and C-EO705 with 95% efficiency. [LAC 33:III.5109.A]

### **EQT061      15Y3-71, EO Storage vessel V-EO995**

- 90 Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere. [LAC 33:III.2103.F]
- 91 Equip with a submerged fill pipe. [LAC 33:III.2103.F]
- 92 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e. [LAC 33:III.2103.H.3]
- 93 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable. [LAC 33:III.2103.I]
- 94 Emissions controlled by absorbers C-EO605 and C-EO705 with 95% efficiency. [LAC 33:III.5109.A]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

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### EQT062 CWHE003, Cooling Water Heat Exchanger E-EO103

95 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33.III.Chapter 51. [LAC 33.III.5109.A]

96 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT063 CWHE004, Cooling Water Heat Exchanger E-EO104

97 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33.III.Chapter 51. [LAC 33.III.5109.A]

98 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT065 CWHE005, Cooling Water Heat Exchanger E-EO105

99 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33.III.Chapter 51. [LAC 33.III.5109.A]

100 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT066 CWHE006, Cooling Water Heat Exchanger E-EO140

101 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33.III.Chapter 51. [LAC 33.III.5109.A]

102 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT067 CWHE007, Cooling Water Heat Exchanger, E-EO143

103 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33.III.Chapter 51. [LAC 33.III.5109.A]

104 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT068 CWHE008, Cooling Water Heat Exchanger E-EO203

105 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33.III.Chapter 51. [LAC 33.III.5109.A]

106 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT069 CWHE012, Cooling Water Heat Exchanger E-EO216

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### EQT069 CWHE012, Cooling Water Heat Exchanger E-EO216

- 107 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
108 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT070 CWHE013, Cooling Water Heat Exchanger E-EO220

- 109 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
110 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT071 CWHE014, Cooling Water Heat Exchanger E-EO221

- 111 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
112 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT072 CWHE024, Cooling Water Heat Exchanger E-EO307

- 113 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
114 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT073 CWHE028, Cooling Water Heat Exchanger A-EO608

- 115 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
116 Heat Exchanger: The heat exchange system is operated with the minimum pressure on the cooling water side at least 5 psi greater than the maximum pressure on the process side. [40 CFR 63.104(a)(1)]

### EQT074 CWHE029, Cooling Water Heat Exchanger A-EO609

- 117 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
118 Heat Exchanger: The heat exchange system is operated with the minimum pressure on the cooling water side at least 5 psi greater than the maximum pressure on the process side. [40 CFR 63.104(a)(1)]

### EQT075 CWHE030, Cooling Water Heat Exchanger E-EO503

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER200500033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### EQT075 CWHE030, Cooling Water Heat Exchanger E-EO503

119 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III, Chapter 51. [LAC 33:III, 5109, A]

120 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT076 CWHE031, Cooling Water Heat Exchanger E-EO504

121 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III, Chapter 51. [LAC 33:III, 5109, A]

122 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT077 CWHE032, Cooling Water Heat Exchanger E-EO603

123 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III, Chapter 51. [LAC 33:III, 5109, A]

124 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT078 CWHE033, Cooling Water Heat Exchanger E-EO605

125 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III, Chapter 51. [LAC 33:III, 5109, A]

126 Heat exchange systems (cooling water): HAP monitored by the regulation's specified method(s) monthly for the first 6 months and quarterly thereafter to detect leaks. Monitor for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. Subpart F. [40 CFR 63.104(b)]

Which Months: All Year Statistical Basis: None specified

127 Heat exchange systems: Maintain, at all times, the monitoring plan currently in use. Maintain on-site, or accessible from a central location by computer or other means that provide access within 2 hours after a request. If a monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation. Retain the superseded plan on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation. Subpart F. [40 CFR 63.104(c)(3)]

128 Heat exchange systems: Prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. Require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Include the information specified in 40 CFR 63.104(c)(1)(i) and (ii). Monitor no less frequently than monthly for the first six months and quarterly thereafter to detect leaks. If a substantial leak is identified by methods other than those described in the monitoring plan and method(s) specified in the plan could not detect the leak, revise the plan and document the basis for the changes. Complete revisions to the plan no later than 180 days after discovery of the leak. Subpart F. [40 CFR 63.104(c)]

129 Heat exchange systems: Repair leaks as soon as practicable but not later than 45 calendar days after receiving results of monitoring tests indicating a leak, if a leak is detected according to the criteria of 40 CFR 63.104(b) or (c). Once the leak has been repaired, confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. Subpart F. [40 CFR 63.104(d)]

130 Heat exchange systems: Equipment/operational data recordkeeping by electronic or hard copy continuously. Retain the records identified in 40 CFR 63.104(f)(1)(i) through (iv) as specified in 40 CFR 63.103(c)(1). Subpart F. [40 CFR 63.104(f)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033  
Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### EQT079 CWHE034, Cooling Water Heat Exchanger E-EO606

- 131 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II.Chapter 51. [LAC 33:III.5109.A]  
132 Heat Exchanger: The recirculating heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(5)]

### EQT080 CWHE035, Cooling Water Heat Exchanger E-EO607

- 133 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II.Chapter 51. [LAC 33:III.5109.A]  
134 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT081 CWHE036, Cooling Water Heat Exchanger E-EO608

- 135 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II.Chapter 51. [LAC 33:III.5109.A]  
136 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT082 CWHE037, Cooling Water Heat Exchanger E-EO616

- 137 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II.Chapter 51. [LAC 33:III.5109.A]  
138 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT083 CWHE038, Cooling Water Heat Exchanger E-EO617

- 139 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II.Chapter 51. [LAC 33:III.5109.A]  
140 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT084 CWHE039, Cooling Water Heat Exchanger E-EO618

- 141 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II.Chapter 51. [LAC 33:III.5109.A]  
142 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT085 CWHE040, Cooling Water Heat Exchanger E-EO619

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### EQT085 CWHE040, Cooling Water Heat Exchanger E-EO619

143 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II,Chapter 51. [LAC 33:II,5109.A]

144 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT086 CWHE041, Cooling Water Heat Exchanger E-EO620

145 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II,Chapter 51. [LAC 33:II,5109.A]

146 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT087 CWHE042, Cooling Water Heat Exchanger E-EO621

147 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II,Chapter 51. [LAC 33:II,5109.A]

148 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT088 CWHE043, Cooling Water Heat Exchanger E-EO622

149 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II,Chapter 51. [LAC 33:II,5109.A]

150 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT089 CWHE044, Cooling Water Heat Exchanger E-EO623

151 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II,Chapter 51. [LAC 33:II,5109.A]

152 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT090 CWHE045, Cooling Water Heat Exchanger E-EO624

153 Compliance with all the applicable requirements of NESHPAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II,Chapter 51. [LAC 33:II,5109.A]

154 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHPAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT091 CWHE046, Cooling Water Heat Exchanger E-EO625

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033  
Permit Number: 2057-V3  
Air - Title V Regular Permit Renewal

### EQT091 CWHE046, Cooling Water Heat Exchanger E-EO625

- 155 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III Chapter 51. [LAC 33:III.5109.A]
- 156 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT092 CWHE047, Cooling Water Heat Exchanger E-EO702

- 157 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III Chapter 51. [LAC 33:III.5109.A]
- 158 Heat exchange systems (cooling water): HAP monitored by the regulation's specified method(s) monthly for the first 6 months and quarterly thereafter to detect leaks. Monitor for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. Subpart F. [40 CFR 63.104(b)]
- 159 Which Months: All Year Statistical Basis: None specified
- 160 Heat exchange systems: Maintain, at all times, the monitoring plan currently in use. Maintain on-site, or accessible from a central location by computer or other means that provide access within 2 hours after a request. If a monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation. Retain the superseded plan on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation. Subpart F. [40 CFR 63.104(c)(3)]
- 161 Heat exchange systems: Prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. Require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Include the information specified in 40 CFR 63.104(c)(1)(i) and (ii). Monitor no less frequently than monthly for the first six months and quarterly thereafter to detect leaks. If a substantial leak is identified by methods other than those described in the monitoring plan and method(s) specified in the plan could not detect the leak, revise the plan and document the basis for the changes. Complete revisions to the plan no later than 180 days after discovery of the leak. Subpart F. [40 CFR 63.104(c)]
- 162 Heat exchange systems: Repair leaks as soon as practicable but not later than 45 calendar days after receiving results of monitoring tests indicating a leak, if a leak is detected according to the criteria of 40 CFR 63.104(b) or (c). Once the leak has been repaired, confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. Subpart F. [40 CFR 63.104(d)]
- 163 Heat exchange systems: Equipment/operational data recordkeeping by electronic or hard copy continuously. Retain the records identified in 40 CFR 63.104(h)(1)(i) through (iv) as specified in 40 CFR 63.103(c)(1). Subpart F. [40 CFR 63.104(h)]

### EQT093 CWHE048, Cooling Water Heat Exchanger E-EO705

- 163 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III Chapter 51. [LAC 33:III.5109.A]
- 164 Heat exchange systems (cooling water): HAP monitored by the regulation's specified method(s) monthly for the first 6 months and quarterly thereafter to detect leaks. Monitor for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. Subpart F. [40 CFR 63.104(b)]
- 165 Which Months: All Year Statistical Basis: None specified
- 166 Heat exchange systems: Maintain, at all times, the monitoring plan currently in use. Maintain on-site, or accessible from a central location by computer or other means that provide access within 2 hours after a request. If a monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation. Retain the superseded plan on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation. Subpart F. [40 CFR 63.104(c)(3)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033  
Permit Number: 2057-V3  
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### EQT093 CWHE048, Cooling Water Heat Exchanger E-EOT05

166 Heat exchange systems: Prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. Require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Include the information specified in 40 CFR 63.104(c)(1)(i) and (ii). Monitor no less frequently than monthly for the first six months and quarterly thereafter to detect leaks. If a substantial leak is identified by methods other than those described in the monitoring plan and method(s) specified in the plan could not detect the leak, revise the plan and document the basis for the changes.

Complete revisions to the plan no later than 180 days after discovery of the leak. Subpart F. [40 CFR 63.104(c)]

167 Heat exchange systems: Repair leaks as soon as practicable but not later than 45 calendar days after receiving results of monitoring tests indicating a leak, if a leak is detected according to the criteria of 40 CFR 63.104(b) or (c). Once the leak has been repaired, confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. Subpart F. [40 CFR 63.104(d)]

168 Heat exchange systems: Equipment/operational data recordkeeping by electronic or hard copy continuously. Retain the records identified in 40 CFR 63.104(f)(1)(i) through (iv) as specified in 40 CFR 63.103(c)(1). Subpart F. [40 CFR 63.104(f)]

### EQT094 CWHE049, Cooling Water Heat Exchanger E-EOT06

169 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33.III.Chapter 51. [LAC 33.III.5109.A]

170 Heat exchange systems (cooling water): HAP monitored by the regulation's specified method(s) monthly for the first 6 months and quarterly thereafter to detect leaks. Monitor for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. Subpart F. [40 CFR 63.104(b)]

Which Months: All Year Statistical Basis: None specified

171 Heat exchange systems: Maintain, at all times, the monitoring plan currently in use. Maintain on-site, or accessible from a central location by computer or other means that provide access within 2 hours after a request. If a monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation. Retain the superseded plan on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation. Subpart F. [40 CFR 63.104(c)(3)]

172 Heat exchange systems: Prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. Require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Include the information specified in 40 CFR 63.104(c)(1)(i) and (ii). Monitor no less frequently than monthly for the first six months and quarterly thereafter to detect leaks. If a substantial leak is identified by methods other than those described in the monitoring plan and method(s) specified in the plan could not detect the leak, revise the plan and document the basis for the changes.

Complete revisions to the plan no later than 180 days after discovery of the leak. Subpart F. [40 CFR 63.104(c)]

173 Heat exchange systems: Repair leaks as soon as practicable but not later than 45 calendar days after receiving results of monitoring tests indicating a leak, if a leak is detected according to the criteria of 40 CFR 63.104(b) or (c). Once the leak has been repaired, confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. Subpart F. [40 CFR 63.104(d)]

174 Heat exchange systems: Equipment/operational data recordkeeping by electronic or hard copy continuously. Retain the records identified in 40 CFR 63.104(f)(1)(i) through (iv) as specified in 40 CFR 63.103(c)(1). Subpart F. [40 CFR 63.104(f)]

### EQT095 CWHE050, Cooling Water Heat Exchanger E-EOT07

175 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33.III.Chapter 51. [LAC 33.III.5109.A]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033  
Permit Number: 2057-V3  
Air - Title V Regular Permit Renewal

### EQT095 Cooling Water Heat Exchanger E-E0707

176 Heat exchange systems (cooling water): HAP monitored by the regulation's specified method(s) monthly for the first 6 months and quarterly thereafter to detect leaks. Monitor for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. Subpart F. [40 CFR 63.104(b)]

Which Months: All Year Statistical Basis: None specified

177 Heat exchange systems: Maintain, at all times, the monitoring plan currently in use. Maintain on-site, or accessible from a central location by computer or other means that provide access within 2 hours after a request. If a monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation. Retain the superseded plan on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation. Subpart F. [40 CFR 63.104(c)(3)]

178 Heat exchange systems: Prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. Require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Include the information specified in 40 CFR 63.104(c)(1)(i) and (ii). Monitor no less frequently than monthly for the first six months and quarterly thereafter to detect leaks. If a substantial leak is identified by methods other than those described in the monitoring plan and method(s) specified in the plan could not detect the leak, revise the plan and document the basis for the changes. Complete revisions to the plan no later than 180 days after discovery of the leak. Subpart F. [40 CFR 63.104(c)]

179 Heat exchange systems: Repair leaks as soon as practicable but not later than 45 calendar days after receiving results of monitoring tests indicating a leak, if a leak is detected according to the criteria of 40 CFR 63.104(b) or (c). Once the leak has been repaired, confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. Subpart F. [40 CFR 63.104(d)]

180 Heat exchange systems: Equipment/operational data recordkeeping by electronic or hard copy continuously. Retain the records identified in 40 CFR 63.104(f)(1)(i) through (iv) as specified in 40 CFR 63.103(c)(1). Subpart F. [40 CFR 63.104(f)]

### EQT096 Cooling Water Heat Exchanger E-E0708

181 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II, Chapter 51. [LAC 33:III.5109.A]

182 Heat exchange systems (cooling water): HAP monitored by the regulation's specified method(s) monthly for the first 6 months and quarterly thereafter to detect leaks. Monitor for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. Subpart F. [40 CFR 63.104(b)]

Which Months: All Year Statistical Basis: None specified

183 Heat exchange systems: Maintain, at all times, the monitoring plan currently in use. Maintain on-site, or accessible from a central location by computer or other means that provide access within 2 hours after a request. If a monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation. Retain the superseded plan on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation. Subpart F. [40 CFR 63.104(c)(3)]

184 Heat exchange systems: Prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. Require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Include the information specified in 40 CFR 63.104(c)(1)(i) and (ii). Monitor no less frequently than monthly for the first six months and quarterly thereafter to detect leaks. If a substantial leak is identified by methods other than those described in the monitoring plan and method(s) specified in the plan could not detect the leak, revise the plan and document the basis for the changes. Complete revisions to the plan no later than 180 days after discovery of the leak. Subpart F. [40 CFR 63.104(c)]

185 Heat exchange systems: Repair leaks as soon as practicable but not later than 45 calendar days after receiving results of monitoring tests indicating a leak, if a leak is detected according to the criteria of 40 CFR 63.104(b) or (c). Once the leak has been repaired, confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. Subpart F. [40 CFR 63.104(d)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **EQT096 Cooling Water Heat Exchanger E-E0708**

186 Heat exchange systems: Equipment/operational data recordkeeping by electronic or hard copy continuously. Retain the records identified in 40 CFR 63.104(f)(1)(i) through (iv) as specified in 40 CFR 63.103(c)(1). Subpart F. [40 CFR 63.104(f)]

### **EQT097 Cooling Water Heat Exchanger E-E0709**

187 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33.III.Chapter 51. [LAC 33.III.5109.A]

188 Heat exchange systems (cooling water): HAP monitored by the regulation's specified method(s) monthly for the first 6 months and quarterly thereafter to detect leaks. Monitor for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. Subpart F. [40 CFR 63.104(b)]

Which Months: All Year Statistical Basis: None specified  
189 Heat exchange systems: Maintain, at all times, the monitoring plan currently in use. Maintain on-site, or accessible from a central location by computer or other means that provide access within 2 hours after a request. If a monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation. Retain the superseded plan on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation. Subpart F. [40 CFR 63.104(c)(3)]

190 Heat exchange systems: Prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. Require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Include the information specified in 40 CFR 63.104(c)(1) and (ii). Monitor no less frequently than monthly for the first six months and quarterly thereafter to detect leaks. If a substantial leak is identified by methods other than those described in the monitoring plan and method(s) specified in the plan could not detect the leak, revise the plan and document the basis for the changes. Complete revisions to the plan no later than 180 days after discovery of the leak. Subpart F. [40 CFR 63.104(c)]

191 Heat exchange systems: Repair leaks as soon as practicable but not later than 45 calendar days after receiving results of monitoring tests indicating a leak, if a leak is detected according to the criteria of 40 CFR 63.104(b) or (c). Once the leak has been repaired, confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. Subpart F. [40 CFR 63.104(d)]

192 Heat exchange systems: Equipment/operational data recordkeeping by electronic or hard copy continuously. Retain the records identified in 40 CFR 63.104(f)(1)(i) through (iv) as specified in 40 CFR 63.103(c)(1). Subpart F. [40 CFR 63.104(f)]

### **EQT098 Cooling Water Heat Exchanger E-E0712**

193 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33.III.Chapter 51. [LAC 33.III.5109.A]

194 Heat exchange systems (cooling water): HAP monitored by the regulation's specified method(s) monthly for the first 6 months and quarterly thereafter to detect leaks. Monitor for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. Subpart F. [40 CFR 63.104(b)]

Which Months: All Year Statistical Basis: None specified  
195 Heat exchange systems: Maintain, at all times, the monitoring plan currently in use. Maintain on-site, or accessible from a central location by computer or other means that provide access within 2 hours after a request. If a monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation. Retain the superseded plan on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation. Subpart F. [40 CFR 63.104(c)(3)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### EQT098 CWHE053, Cooling Water Heat Exchanger E-EOT12

196 Heat exchange systems: Prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. Require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Include the information specified in 40 CFR 63.104(c)(1)(i) and (ii). Monitor no less frequently than monthly for the first six months and quarterly thereafter to detect leaks. If a substantial leak is identified by methods other than those described in the monitoring plan and method(s) specified in the plan could not detect the leak, revise the plan and document the basis for the changes.

Complete revisions to the plan no later than 180 days after discovery of the leak. Subpart F. [40 CFR 63.104(c)]

197 Heat exchange systems: Repair leaks as soon as practicable but not later than 45 calendar days after receiving results of monitoring tests indicating a leak, if a leak is detected according to the criteria of 40 CFR 63.104(b) or (c). Once the leak has been repaired, confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. Subpart F. [40 CFR 63.104(d)]

198 Heat exchange systems: Equipment/operational data recordkeeping by electronic or hard copy continuously. Retain the records identified in 40 CFR 63.104(f) as specified in 40 CFR 63.103(c)(1). Subpart F. [40 CFR 63.104(f)]

### EQT099 CWHE054, Cooling Water Heat Exchanger E-EOT13

199 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III.Chapter 51. [LAC 33:III.5109.A]

200 Heat exchange systems (cooling water): HAP monitored by the regulation's specified method(s) monthly for the first 6 months and quarterly thereafter to detect leaks. Monitor for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. Subpart F. [40 CFR 63.104(b)]

Which Months: All Year Statistical Basis: None specified  
201 Heat exchange systems: Maintain, at all times, the monitoring plan currently in use. Maintain on-site, or accessible from a central location by computer or other means that provide access within 2 hours after a request. If a monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation. Retain the superseded plan on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation. Subpart F. [40 CFR 63.104(c)(3)]

202 Heat exchange systems: Prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. Require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Include the information specified in 40 CFR 63.104(c)(1)(i) and (ii). Monitor no less frequently than monthly for the first six months and quarterly thereafter to detect leaks. If a substantial leak is identified by methods other than those described in the monitoring plan and method(s) specified in the plan could not detect the leak, revise the plan and document the basis for the changes.

Complete revisions to the plan no later than 180 days after discovery of the leak. Subpart F. [40 CFR 63.104(c)]

203 Heat exchange systems: Repair leaks as soon as practicable but not later than 45 calendar days after receiving results of monitoring tests indicating a leak, if a leak is detected according to the criteria of 40 CFR 63.104(b) or (c). Once the leak has been repaired, confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. Subpart F. [40 CFR 63.104(d)]

204 Heat exchange systems: Equipment/operational data recordkeeping by electronic or hard copy continuously. Retain the records identified in 40 CFR 63.104(f) as specified in 40 CFR 63.103(c)(1). Subpart F. [40 CFR 63.104(f)]

### EQT100 CWHE055, Cooling Water Heat Exchanger E-EOT15

205 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III.Chapter 51. [LAC 33:III.5109.A]

206 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

## SPECIFIC REQUIREMENTS

AI ID: 11136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### EQT101 CWHE056, Cooling Water Heat Exchanger E-E0716

- 207 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
208 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT102 CWHE057, Cooling Water Heat Exchanger E-E0717

- 209 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
210 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT103 CWHE058, Cooling Water Heat Exchanger E-E0718

- 211 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
212 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT104 CWHE059, Cooling Water Heat Exchanger E-E0202

- 213 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
214 Heat Exchanger: The recirculating heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 4 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(5)]

### EQT105 CWHE060, Cooling Water Heat Exchanger EG-1

- 215 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
216 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT106 CWHE061, Cooling Water Heat Exchanger EG-2

- 217 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III,5109.A]  
218 Heat Exchanger: Once through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutant listed in Table 9 of NESHAP, 40 CFR 63, Subpart G. [40 CFR 63.104(a)(6)]

### EQT107 CWHE062, Cooling Water Heat Exchanger EOEG 12

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033  
Permit Number: 2057-V3  
Air - Title V Regular Permit Renewal

### EQT107 CWHE062, Cooling Water Heat Exchanger EOEG 12

- 219 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II,Chapter 51. [LAC 33:III,5109.A]  
220 Heat Exchanger: There is an intervening cooling fluid, containing less than 5 percent by weight of total hazardous air pollutant listed in Table 4 of NESHAP, 40 CFR 63. Subpart G, between the process and the cooling water. [40 CFR 63.104(a)(2)]

### EQT108 NNN-01, Column C-EG720

- 221 Combust the emissions in a flare that meets the requirements of 40 CFR 60.18. Subpart NNN. [40 CFR 60.662(b)]  
222 Flow monitored by flow indicator hourly. Monitor the vent stream flow to the flare. Install the flow indicator in the vent stream from each affected facility at a point closest to the flare and before being joined with any other vent stream. Subpart NNN. [40 CFR 60.663(b)(2)]  
Which Months: All Year Statistical Basis: None specified  
223 Flow recordkeeping by electronic or hard copy hourly. Record the vent stream flow to the flare at least once every hour for each affected facility. Subpart NNN. [40 CFR 60.663(b)(2)]  
224 CAM: The emissions are routed to an existing Flare, Emission Point 3-73 in Permit No. 2669-V1. Compliance with the requirements of 40 CFR 60.18 is considered compliance assurance monitoring under 40 CFR 64. [40 CFR 64]

### EQT109 NNN-46, Column C-EG503

- 225 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II,Chapter 51. [LAC 33:III,5109.A]  
226 Shall comply with all the applicable requirements of NESHAP, 40 CFR 60.662, 60.664(d), (e), and (f), and 60.665(h) and (l) if TFE index value > 8 index value without use of VOC emission control device. Subpart NNN. [40 CFR 60.660(c)(4)]  
Which Months: All Year Statistical Basis: None specified  
227 Permittee complying with the provisions of 40 CFR 60.662(c) shall keep up-to-date, readily accessible records as per the requirements of 40 CFR 60.665(h). Subpart NNN. [40 CFR 60.665(h)]  
228 Submit report: Due semiannually. Submit initial report within 6 months after the initial start-up date. Include the information outlined in 40 CFR 60.665(l)(1) through (l)(7). Subpart NNN. [40 CFR 60.665(l)]

### EQT110 PWW-04, Process Wastewater V-EO205

- 229 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:II,Chapter 51. [LAC 33:III,5109.A]  
230 Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii). Subpart G. [40 CFR 63.132(a)(1)]  
231 Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either 40 CFR 63.132(b)(1)(i) or (b)(1)(ii), and (b)(1)(iii). Subpart G. [40 CFR 63.132(b)(1)]  
232 Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Subpart G. [40 CFR 63.132(c)]  
233 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records specified in 40 CFR 63.147(a) through (l), as applicable. Subpart G. [40 CFR 63.147]

## SPECIFIC REQUIREMENTS

**AI ID:** 1136 - Shell Chemical Co - Geismar Plant  
**Activity Number:** PER20050033  
**Permit Number:** 2057-V3  
**Air - Title V Regular Permit Renewal**

### **EQT111 PWW-05, Process Wastewater V-EO303A**

- 234 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III.5109.A]
- 235 Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii).
- Subpart G. [40 CFR 63.132(a)(1)]
- 236 Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either 40 CFR 63.132(b)(1)(i) or (b)(1)(ii), and (b)(1)(iii). Subpart G. [40 CFR 63.132(b)(1)]
- 237 Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Subpart G. [40 CFR 63.132(c)]
- 238 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records specified in 40 CFR 63.147(a) through (f), as applicable. Subpart G. [40 CFR 63.147]

### **EQT112 PWW-06, Process Wastewater V-EO202**

- 239 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III.5109.A]
- 240 Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii).
- Subpart G. [40 CFR 63.132(a)(1)]
- 241 Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either 40 CFR 63.132(b)(1)(i) or (b)(1)(ii), and (b)(1)(iii). Subpart G. [40 CFR 63.132(b)(1)]
- 242 Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Subpart G. [40 CFR 63.132(c)]
- 243 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records specified in 40 CFR 63.147(a) through (f), as applicable. Subpart G. [40 CFR 63.147]

### **EQT113 PWW-07, Process Wastewater V-EO201**

- 244 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III.5109.A]
- 245 Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii).
- Subpart G. [40 CFR 63.132(a)(1)]
- 246 Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either 40 CFR 63.132(b)(1)(i) or (b)(1)(ii), and (b)(1)(iii). Subpart G. [40 CFR 63.132(b)(1)]
- 247 Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Subpart G. [40 CFR 63.132(c)]
- 248 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records specified in 40 CFR 63.147(a) through (f), as applicable. Subpart G. [40 CFR 63.147]

### **EQT114 PWW-08, W-EO101 Blowdown**

- 249 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III,Chapter 51. [LAC 33:III.5109.A]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **EQT114 PWW-08, W-EQ101 Blowdown**

- 250 Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii). Subpart G. [40 CFR 63.132(a)(1)]
- 251 Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either 40 CFR 63.132(b)(1)(i) or (b)(1)(ii), and (b)(1)(iii). Subpart G. [40 CFR 63.132(b)(1)]
- 252 Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Subpart G. [40 CFR 63.132(c)]
- 253 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records specified in 40 CFR 63.147(a) through (f), as applicable. Subpart G. [40 CFR 63.147]

### **EQT115 PWW-09, Process Wastewater V-EO605**

- 254 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III.Chapter 51. [LAC 33:III.5109.A]
- 255 Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii). Subpart G. [40 CFR 63.132(a)(1)]
- 256 Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either 40 CFR 63.132(b)(1)(i) or (b)(1)(ii), and (b)(1)(iii). Subpart G. [40 CFR 63.132(b)(1)]
- 257 Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Subpart G. [40 CFR 63.132(c)]
- 258 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records specified in 40 CFR 63.147(a) through (f), as applicable. Subpart G. [40 CFR 63.147]

### **EQT116 PWW-10, Process Wastewater V-EG505**

- 259 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III.Chapter 51. [LAC 33:III.5109.A]
- 260 Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii). Subpart G. [40 CFR 63.132(a)(1)]
- 261 Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either 40 CFR 63.132(b)(1)(i) or (b)(1)(ii), and (b)(1)(iii). Subpart G. [40 CFR 63.132(b)(1)]
- 262 Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Subpart G. [40 CFR 63.132(c)]
- 263 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records specified in 40 CFR 63.147(a) through (f), as applicable. Subpart G. [40 CFR 63.147]

### **EQT117 PWW-11, Process Wastewater V-EG801**

- 264 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III.Chapter 51. [LAC 33:III.5109.A]
- 265 Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii). Subpart G. [40 CFR 63.132(a)(1)]

## SPECIFIC REQUIREMENTS

AI ID: 11136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### EQT117 PWW-11, Process Wastewater V-EG801

- 266 Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either 40 CFR 63.132(b)(1)(i) or (b)(1)(ii), and (b)(1)(iii). Subpart G. [40 CFR 63.132(b)(1)]
- 267 Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Subpart G. [40 CFR 63.132(c)]
- 268 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records specified in 40 CFR 63.147(a) through (f), as applicable. Subpart G. [40 CFR 63.147]

### EQT118 PWW-12, Process Wastewater V-EG741

- 269 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III. Chapter 51. [LAC 33:III.5109.A]
- 270 Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii). Subpart G. [40 CFR 63.132(a)(1)]
- 271 Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either 40 CFR 63.132(b)(1)(i) or (b)(1)(ii), and (b)(1)(iii). Subpart G. [40 CFR 63.132(b)(1)]
- 272 Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Subpart G. [40 CFR 63.132(c)]
- 273 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records specified in 40 CFR 63.147(a) through (f), as applicable. Subpart G. [40 CFR 63.147]

### EQT119 PWW-22, EO2 Oxidizer KO Pot

- 274 Compliance with all the applicable requirements of NESHAP, 40 CFR 63.104 is considered compliance with all the applicable requirements of LAC 33:III. Chapter 51. [LAC 33:III.5109.A]
- 275 Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii). Subpart G. [40 CFR 63.132(a)(1)]
- 276 Determine whether each wastewater stream requires control for Table 8 compounds by complying with the requirements in either 40 CFR 63.132(b)(1)(i) or (b)(1)(ii), and (b)(1)(iii). Subpart G. [40 CFR 63.132(b)(1)]
- 277 Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Subpart G. [40 CFR 63.132(c)]
- 278 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records specified in 40 CFR 63.147(a) through (f), as applicable. Subpart G. [40 CFR 63.147]

### EQT120 PV-04, Process Vent K-EO601

- 279 Emissions routed to an existing Boilers, F-U201 and F-U202 in Permit No. 2136-V2. [LAC 33:III.5109.A]

### EQT121 PV-05, Process Vent K-EO604

- 280 Emissions routed to an existing Boilers, F-U201 and F-U202 in Permit No. 2136-V2. [LAC 33:III.5109.A]

## **SPECIFIC REQUIREMENTS**

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **EQT122 PV-06, Process Vent K-EO303A**

281 Emissions routed to an existing Flare, Emission Point 03-73 in Permit No. 2669.V0. [LAC 33:III.5109.A]

### **EQT123 PV-07, Process Vent K-EO703**

282 Emissions routed to an existing Flare, Emission Point 03-73 in Permit No. 2669.V0. [LAC 33:III.5109.A]

### **EQT124 PV-15, Process Vent K-EO605**

283 Emissions routed to an existing Thermal Oxidizer, Emission Point 97-00. [LAC 33:III.5109.A]

### **EQT125 60-86, Flasher Tops Accum V-EG731**

284 Compliance with all the applicable requirements of NSPS, 40 CFR 60. Subpart NNN is considered compliance with all the applicable requirements of LAC 33:III.Chapter 51. [LAC 33:III.5109.A]

285 Combust the emissions in a flare that meets the requirements of 40 CFR 60.18. Subpart NNN. [40 CFR 60.662(b)]

286 Flow monitored by flow indicator hourly. Monitor the vent stream flow to the flare. Install the flow indicator in the vent stream from each affected facility at a point closest to the flare and before being joined with any other vent stream. Subpart NNN. [40 CFR 60.663(b)(2)]

Which Months: All Year Statistical Basis: None specified

287 Flow recordkeeping by electronic or hard copy hourly. Record the vent stream flow to the flare at least once every hour for each affected facility. Subpart NNN. [40 CFR 60.663(b)(2)]

288 TRE index value > 4.0 (no units). Subpart G. [40 CFR 63.113(e)]

Which Months: All Year Statistical Basis: None specified

289 Recalculate the TRE index value, flow, or organic hazardous air pollutants concentration for each process vent, as necessary to determine whether the vent is Group 1 or Group 2, whenever process changes are made that could reasonably be expected to change the vent to a Group 1 vent. Subpart G. [40 CFR 63.115(e)]

290 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records of measurements, engineering assessments, and calculations performed to determine the TRE index value of the vent stream. Include all data, assumptions and procedures used for the engineering assessment, as specified in 40 CFR 63.115(d)(1). Subpart G. [40 CFR 63.117(b)]

291 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep up-to-date, readily accessible records of any process changes as defined in 40 CFR 63.115(e), and any recalculation of the TRE index value pursuant to 40 CFR 63.115(e). Subpart G. [40 CFR 63.118(c)]

292 Submit report: Due within 180 calendar days after a process change, as defined in 40 CFR 63.115(e), is made that causes a Group 2 process vent with a TRE greater than 4.0 to become a Group 2 process vent with a TRE less than 4.0. Include the information specified in 40 CFR 63.118(h)(1) through (h)(3). Subpart G. [40 CFR 63.118(h)]

293 CAM: The emissions are routed to an existing Flare, Emission Point 3-73 in Permit No. 2669.V1. Compliance with the requirements of 40 CFR 60.18 is considered compliance assurance monitoring under 40 CFR 64. [40 CFR 64]

### **FUG003 55C-88, Fugitive Emissions EO2**

294 Equip all rotary pumps and compressors handling volatile organic compounds having a true vapor pressure of 1.5 psia or greater at handling conditions with mechanical seals or other equivalent equipment. [LAC 33:III.2111]

295 Compliance with all the applicable requirements of NESHAP, 40 CFR 63, Subpart H is considered compliance with all the applicable requirements of LAC 33:III.2122. [LAC 33:III.2122]

## **SPECIFIC REQUIREMENTS**

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **FUG003 Fugitive Emissions EO2**

- 296 Permittee shall comply with the requirements of 40 CFR 63, Subpart F and H plus the dual mechanical seals on EO pumps as per Order No. AE-O-94-0132 dated 9/25/1994. Constitutes MACT. [LAC 33.III.5109.A]
- 297 Identify each piece of equipment in a process unit such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H. Subpart H. [40 CFR 63.162(c)]
- 298 Clearly identify leaking equipment, for leaking equipment detected as specified in 40 CFR 63.163, 40 CFR 63.164, 40 CFR 63.168, 40 CFR 63.169, and 40 CFR 63.172 through 63.174. The identification may be removed after the equipment is repaired, except for valves or for connectors subject to 40 CFR 63.174(c)(1)(i). The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 63.175(e)(i)(D), and no leak has been detected during the follow-up monitoring. If electing to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring. Subpart H. [40 CFR 63.162(f)]
- 299 Pumps in light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, except as provided in 40 CFR 63.162(b) and 63.163(e) through (j). If a reading of 10,000 ppm (phase I); 5,000 ppm (phase II); or 5,000 ppm (phase III, pumps handling polymerizing monomers), 2,000 ppm (phase III, pumps in food/medical service), or 1,000 ppm (phase III, all other pumps) or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(1)]
- Which Months: All Year Statistical Basis: None specified
- 300 Pumps in light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected. If a leak is detected, initiate the repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(3)]
- Which Months: All Year Statistical Basis: None specified
- 301 Pumps in light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.163(c)(3) and 40 CFR 63.171. Subpart H. [40 CFR 63.163(c)]
- 302 Pumps in light liquid service: Implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176, if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak. Subpart H. [40 CFR 63.163(d)(2)]
- 303 Pumps in light liquid service: Determine percent leaking pumps using the equation in 40 CFR 63.163(d)(4). Subpart H. [40 CFR 63.163(d)(4)]
- 304 Pumps in light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(1)]
- 305 Pumps in light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid service. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(2)]
- 306 Pumps in light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(3)]
- 307 Pumps in light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquid dripping from the pump seal at the time of the weekly inspection, monitor the pump as specified in 40 CFR 63.180(b) to determine if there is a leak of organic HAP in the barrier fluid. If an instrument reading of 1,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(4)]
- 308 Pumps in light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)(i)]

## SPECIFIC REQUIREMENTS

All ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### FUG003      55C-88, Fugitive Emissions EO2

- 309 Pumps in light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)]
- 310 Pumps in light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the pump is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.163(e)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)]
- Which Months: All Year   Statistical Basis: None specified
- 311 Pumps in light liquid service (unmanned plant site): Presence of a leak monitored by visual inspection/determination at the regulation's specified frequency. Monitor each pump as often as practicable and at least monthly. Comply with this requirement instead of the weekly visual inspection requirement of 40 CFR 63.163(b)(3) and (e)(4), and the daily requirements of 40 CFR 63.163(e)(5). Subpart H. [40 CFR 63.163(h)]
- Which Months: All Year   Statistical Basis: None specified
- 312 Pumps in light liquid service (unsafe-to-monitor): Determine that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.163(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(1)]
- 313 Pumps in light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulations specified frequency. Maintain a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(2)]
- Which Months: All Year   Statistical Basis: None specified
- 314 Compressors: Equip with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR 63.162(b) and 40 CFR 63.164(h) and (i). Subpart H. [40 CFR 63.164(a)]
- 315 Compressors: Operate the seal system with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equip with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid directly into a process stream. Subpart H. [40 CFR 63.164(b)]
- 316 Compressors: Ensure that the barrier fluid is not in light liquid service. Subpart H. [40 CFR 63.164(c)]
- 317 Compressors: Equip each barrier fluid system as described in 40 CFR 63.164(a) through (c) with a sensor that will detect failure of the seal system, barrier fluid system, or both. Subpart H. [40 CFR 63.164(d)]
- 318 Compressors (sensor): Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. Subpart H. [40 CFR 63.164(e)(2)]
- 319 Compressors: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.164(g)]
- 320 Compressors (no detectable emissions): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially and annually, and at other times requested by DEQ. Comply with this requirement instead of the requirements in 40 CFR 63.164(a) through (h). Subpart H. [40 CFR 63.164(i)(2)]
- Which Months: All Year   Statistical Basis: None specified
- 321 Compressors (sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an alarm, unless the compressor is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under 40 CFR 63.164(e)(2), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.164(g). Subpart H. [40 CFR 63.164]
- Which Months: All Year   Statistical Basis: None specified

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
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Air - Title V Regular Permit Renewal

### FUG003      55C-88, Fugitive Emissions EO2

- 322 Pressure relief device in gas/vapor service: Organic HAP < 500 ppm above background except during pressure releases, as determined by the method specified in 63.180(c).  
Subpart H. [40 CFR 63.165(a)]
- Which Months: All Year   Statistical Basis: None specified
- 323 Pressure relief devices in gas/vapor service: After each pressure release, return to a condition indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.165(b)(1)]
- 324 Pressure relief devices in gas/vapor service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) after the pressure release and being returned to organic HAP service, to confirm the condition indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 63.180(c). Subpart H. [40 CFR 63.165(b)(2)]
- Which Months: All Year   Statistical Basis: None specified
- 325 Pressure relief devices in gas/vapor service (rupture disk): After each pressure release, install a new rupture disk upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.165(a) and (b). Subpart H. [40 CFR 63.165(d)(2)]
- 326 Sampling connection systems: Equip with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 63.162(b). Operate the system as specified in 40 CFR 63.166(b). Subpart H. [40 CFR 63.166]
- 327 Open-ended valves or lines: Equip with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 63.162(b) and 40 CFR 63.167(d) and (e). Ensure that the cap, blind flange, plug or second valve seals the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. Operate each open-ended valve or line equipped with a second valve in a manner such that the valve on the process fluid end is closed before the second valve is closed. Subpart H. [40 CFR 63.167]
- 328 Valves in gas/vapor service or light liquid service (Phase I): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]
- Which Months: All Year   Statistical Basis: None specified
- 329 Valves in gas/vapor service or light liquid service (Phase II): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]
- Which Months: All Year   Statistical Basis: None specified
- 330 Valves in gas/vapor service or light liquid service (Phase III, 2 percent or greater leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly, as specified in 40 CFR 63.180(b); or implement a quality improvement program for valves that complies with the requirements of 40 CFR 63.175 and monitor quarterly. If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). If electing to implement a quality improvement program, follow the procedures in 40 CFR 63.175. Subpart H. [40 CFR 63.168(d)(1)]
- Which Months: All Year   Statistical Basis: None specified
- 331 Valves in gas/vapor service or light liquid service (Phase III, less than 2 percent leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f).
- Permittee may elect to comply with the alternate standards in 40 CFR 63.168(d)(3) and (d)(4). Subpart H. [40 CFR 63.168(d)(2)]
- Which Months: All Year   Statistical Basis: None specified
- 332 Valves in gas/vapor service or light liquid service (after leak repair): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within three months (at least) after repair to determine whether the valve has resumed leaking. Subpart H. [40 CFR 63.168(f)(3)]
- Which Months: All Year   Statistical Basis: None specified
- 333 Valves in gas/vapor service or light liquid service (after leak repair): Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.168(f)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

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### FUG003      55C-88, Fugitive Emissions EO2

- 335 Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.168(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f).
- Subpart H. [40 CFR 63.168(h)(1)]
- 336 Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the valves as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(h)(2)]
- Which Months: All Year   Statistical Basis: None specified
- 337 Valves in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d).
- Subpart H. [40 CFR 63.168(i)(1)]
- 338 Valves in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the valves at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d). Subpart H. [40 CFR 63.168(i)(3)]
- Which Months: All Year   Statistical Basis: None specified
- 339 Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) if evidence of a potential leak to the atmosphere is found by visible, audible, olfactory, or any other detection method. If a reading of 10,000 ppm for agitators, 5,000 ppm for pumps handling polymerizing monomers, 2,000 ppm for all other pumps (including pumps in food/medical service), or 500 ppm for valves, connectors, instrumentation systems, and pressure relief devices, or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.169(a)
- Subpart H. [40 CFR 63.169(c)]
- Which Months: All Year   Statistical Basis: None specified
- 340 Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.169(c)]
- 341 Surge control vessels and bottoms receivers: Equip with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements of 40 CFR 63.172, except as provided in 40 CFR 63.162(b), or comply with the requirements of 40 CFR 63.119(b) or (c), if surge control vessel or bottoms receiver is not routed back to the process and meets the conditions specified in 40 CFR 63 Subpart H Table 2 or Table 3.
- Subpart H. [40 CFR 63.170]
- 342 Closed-vent system (hard-piping): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(h). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(h)(1)]
- Which Months: All Year   Statistical Basis: None specified
- 343 Closed-vent system (hard-piping): Presence of a leak monitored by visual, audible, and/or olfactory annually. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(h)(1)(ii)]
- Which Months: All Year   Statistical Basis: None specified
- 344 Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(h). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(h)(2)(i)]
- Which Months: All Year   Statistical Basis: None specified

## SPECIFIC REQUIREMENTS

AID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033  
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### FUG003      55C-88, Fugitive Emissions EO2

- 345 Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(l)(2)(ii)]  
Which Months: All Year   Statistical Basis: None specified
- 346 Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.172(i). Subpart H. [40 CFR 63.172(h)]
- 347 Closed-vent system (bypass lines): Flow monitored by flow indicator once every 15 minutes. Install flow indicator at the entrance to any bypass line. Subpart H. [40 CFR 63.172(j)(1)]  
Which Months: All Year   Statistical Basis: None specified
- 348 Closed-vent system (bypass lines): Flow recordkeeping by electronic or hard copy once every 15 minutes. Generate records as specified in 40 CFR 63.118(a)(3). Subpart H. [40 CFR 63.172(j)(1)]
- 349 Closed-vent system (bypass lines): Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Subpart H. [40 CFR 63.172(j)(2)]
- 350 Closed-vent system (bypass lines): Seal or closure mechanism monitored by visual inspection/determination monthly to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. Subpart H. [40 CFR 63.172(j)(2)]
- Which Months: All Year   Statistical Basis: None specified
- 351 Closed-vent system (unsafe-to-inspect): Demonstrate that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential dangers as a consequence of complying with 40 CFR 63.172(f)(1) or (f)(2). Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(1)]
- 352 Closed-vent system (unsafe-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times, but not more frequently than annually. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(2)]  
Which Months: All Year   Statistical Basis: None specified
- 353 Closed-vent system (difficult-to-inspect): Demonstrate that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(l)(1)]
- 354 Closed-vent system (difficult-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every five years. Maintain a written plan that requires inspection of the equipment at least once every five years. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(l)(2)]  
Which Months: All Year   Statistical Basis: None specified
- 355 Ensure that the closed-vent system or control device is operating whenever organic HAP emissions are vented to the closed-vent system or control device. Subpart H. [40 CFR 63.172(m)]
- 356 Agitators in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(a)]  
Which Months: All Year   Statistical Basis: None specified
- 357 Agitators in gas/vapor service or light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar) for indications of liquids dripping from the agitator. If there are indications of liquids dripping from the agitator, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(b)]  
Which Months: All Year   Statistical Basis: None specified

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### FUG003      55C-B8, Fugitive Emissions EO2

- 358 Agitators in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.173(c)]
- 359 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the agitator stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(1)]
- 360 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid organic HAP service. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(2)]
- 361 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(3)]
- 362 Agitators in gas/vapor service or light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the agitator seal. If there are indications of liquid dripping from the agitator seal, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(4)]

Which Months: All Year    Statistical Basis: None specified

- 363 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)(i)]
- 364 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)]

- 365 Agitators in gas/vapor service or light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the agitator is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.173(d)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)]

Which Months: All Year    Statistical Basis: None specified

- 366 Agitators in gas/vapor service or light liquid service (unmanned plant site): Presence of a leak monitored by visual inspection/determination at the regulation's specified frequency. Monitor each agitator as often as practicable and at least monthly. Comply with this requirement instead of the weekly visual inspection requirement of 40 CFR 63.173(b)(1) and (d)(4), and the daily requirements of 40 CFR 63.173(d)(5). Subpart H. [40 CFR 63.173(g)]

Which Months: All Year    Statistical Basis: None specified

- 367 Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the agitator cannot be monitored without elevating the monitoring personnel more than two meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(1)]

- 368 Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the agitator at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(3)]
- Which Months: All Year    Statistical Basis: None specified

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369 Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the agitator is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(1)]

370 Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the agitator as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(2)]

Which Months: All Year    Statistical Basis: None specified  
371 Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within 12 months after the compliance date, except as provided in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(1)]

Which Months: All Year    Statistical Basis: None specified  
372 Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within the first 12 months after initial startup or by no later than 12 months after the date of promulgation of a specific subpart that references 40 CFR 63 Subpart H, whichever is later, except as specified in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(2)]

Which Months: All Year    Statistical Basis: None specified  
373 Connectors in gas/vapor service or light liquid service (0.5% or greater leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Subpart H. [40 CFR 63.174(b)(3)(i)]

Which Months: All Year    Statistical Basis: None specified  
374 Connectors in gas/vapor service or light liquid service (less than 0.5% leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every two years. Subpart H. [40 CFR 63.174(b)(3)(ii)]

Which Months: All Year    Statistical Basis: None specified  
375 Connectors in gas/vapor service or light liquid service (opened or otherwise had the seal broken): Presence of a leak monitored by 40 CFR 60, Appendix A, Method 21 within three months after being returned to organic HAP service or when it is reconnected. If monitoring detects a leak, repair according to the provisions of 40 CFR 63.174(d), as specified, except as provided in 40 CFR 63.174(c)(1)(ii). Subpart H. [40 CFR 63.174(c)(1)(i)]

Which Months: All Year    Statistical Basis: None specified  
376 Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Comply with the requirements of 40 CFR 63.169. Subpart H. [40 CFR 63.174(c)(2)(i)]

377 Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Organic HAP monitored by technically sound method within three months after being returned to organic HAP service after having been opened or otherwise had the seal broken. If monitoring detects a leak, implement repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(c)(2)(ii)]

Which Months: All Year    Statistical Basis: None specified  
378 Connectors in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Subpart H. [40 CFR 63.174(d)]

379 Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(a) through (c). Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(1)]

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- 380 Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of connectors as frequently as practicable during safe to monitor times, but not more frequently than the periodic schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(i)(2)]
- Which Months: All Year    Statistical Basis: None specified
- 381 Connectors in gas/vapor service or light liquid service (unsafe-to-repair): Demonstrate that repair personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.174(d). Comply with this requirement instead of the requirements in 40 CFR 63.174(a), (d), and (e). Subpart H. [40 CFR 63.174(g)]
- 382 Connectors in gas/vapor service or light liquid service (inaccessible, ceramic, or ceramic-lined): Make a first attempt at repair within 5 days after leak is detected by visual, audible, olfactory or other means, and complete repairs no later than 15 calendar days after leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Comply with this requirement instead of the monitoring requirements of 40 CFR 63.174(a) and (c) and from the recordkeeping and reporting requirements of 40 CFR 63.181 and 63.182. Subpart H. [40 CFR 63.174(h)(2)]

- 383 Connectors in gas/vapor service or light liquid service: Calculate percent leaking connectors as specified in 40 CFR 63.174(i)(1) and (i)(2). Subpart H. [40 CFR 63.174(i)]
- 384 Comply with the test methods and procedures requirements provided in 40 CFR 63.180. Subpart H. [40 CFR 63.180]
- 385 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records as specified in 40 CFR 63.181(a) through (k).
- Subpart H. [40 CFR 63.181]
- 386 Permittee shall comply with all the applicable requirements of recordkeeping and reporting as per 40 CFR 63.181 and 182. VOHAP (surrogate for HAP) recordkeeping by inspection records as needed. [40 CFR 63.181 and 18]
- 387 Submit Initial Notification: Due within 120 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(b)(1). Subpart H. [40 CFR 63.182(b)]
- 388 Submit application: Due as soon as practicable before the construction or reconstruction is planned to commence (but it need not be sooner than 90 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H). Submit application for approval of construction or reconstruction required by 40 CFR 63.5(d) in lieu of the Initial Notification. Subpart H. [40 CFR 63.182(b)]
- 389 Submit Initial Notification: Due within 90 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(b)(1). Subpart H. [40 CFR 63.182(b)]
- 390 Submit Notification of Compliance Status: Due within 90 days of the compliance dates specified in the 40 CFR 63 subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(c)(1) through (c)(3). Subpart H. [40 CFR 63.182(c)]
- 391 Submit Periodic Reports: Due semiannually starting 6 months after the Notification of Compliance Status, as required in 40 CFR 63.182(c). Include the information specified in 40 CFR 63.182(d)(2) through (d)(4). Subpart H. [40 CFR 63.182(d)]

### **FUG004      55D-88, Fugitive Emissions EG2**

- 392 Equip all rotary pumps and compressors handling volatile organic compounds having a true vapor pressure of 1.5 psia or greater at handling conditions with mechanical seals on other equivalent equipment. [LAC 33:III.21.11]
- 393 Compliance with all the applicable requirements of NESHAP, 40 CFR 63, Subpart H is considered compliance with all the applicable requirements of LAC 33:III.21.22. [LAC 33:III.21.22]
- 394 Permittee shall comply with the requirements of 40 CFR 63, Subpart F and H plus the dual mechanical seals on EO pumps as per Order No. AE-O-94-01;2 dated 9/25/1994. Constitutes MACT. [LAC 33:III.5109.A]
- 395 Identify each piece of equipment in a process unit such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H. Subpart H. [40 CFR 63.162(c)]

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### **FUG004 55D-88, Fugitive Emissions EG2**

396 Clearly identify leaking equipment, for leaking equipment detected as specified in 40 CFR 63.163, 40 CFR 63.164, 40 CFR 63.168, 40 CFR 63.169, and .40 CFR 63.172 through 63.174. The identification may be removed after the equipment is repaired, except for valves or for connectors subject to 40 CFR 63.174(c)(1)(i). The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 63.175(c)(i)(D), and no leak has been detected during the follow-up monitoring. If electing to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring. Subpart H. [40 CFR 63.162(f)]

397 Pumps in light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, except as provided in 40 CFR 63.162(b) and 63.163(e) through (j). If a reading of 10,000 ppm (phase I); 5,000 ppm (phase II); or 5,000 ppm (phase III, pumps handling polymerizing monomers), 2,000 ppm (phase III, pumps in food/medical service), or 1,000 ppm (phase III, all other pumps) or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(1)]

Which Months: All Year Statistical Basis: None specified

398 Pumps in light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected. If a leak is detected, initiate the repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(1)]

Which Months: All Year Statistical Basis: None specified

399 Pumps in light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.163(c)(3) and 40 CFR 63.171. Subpart H. [40 CFR 63.163(c)]

400 Pumps in light liquid service: Implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176, if, in Phase II, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak. Subpart H. [40 CFR 63.163(d)(2)]

401 Pumps in light liquid service: Determine percent leaking pumps using the equation in 40 CFR 63.163(d)(4). Subpart H. [40 CFR 63.163(d)(4)]

402 Pumps in light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(1)]

403 Pumps in light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid service. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(2)]

404 Pumps in light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(3)]

405 Pumps in light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquid dripping from the pump seal at the time of the weekly inspection, monitor the pump as specified in 40 CFR 63.180(b) to determine if there is a leak of organic HAP in the barrier fluid. If an instrument reading of 1,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(4)]

Which Months: All Year Statistical Basis: None specified

406 Pumps in light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)(i)]

407 Pumps in light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)]

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408 Pumps in light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the pump is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.163(e)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)]

Which Months: All Year    Statistical Basis: None specified

409 Pumps in light liquid service (unmanned plant site): Presence of a leak monitored by visual inspection/determination at the regulation's specified frequency. Monitor each pump as often as practicable and at least monthly. Comply with this requirement instead of the weekly visual inspection requirement of 40 CFR 63.163(b)(3) and (e)(4), and the daily requirements of 40 CFR 63.163(e)(5). Subpart H. [40 CFR 63.163(h)]

Which Months: All Year    Statistical Basis: None specified

410 Pumps in light liquid service (unsafe-to-monitor): Determine that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.163(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(1)]

411 Pumps in light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(2)]

Which Months: All Year    Statistical Basis: None specified

412 Compressors: Equip with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR 63.162(b) and 40 CFR 63.164(h) and (i). Subpart H. [40 CFR 63.164(a)]

413 Compressors: Operate the seal system with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equip with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid directly into a process stream. Subpart H. [40 CFR 63.164(b)]

414 Compressors: Ensure that the barrier fluid is not in liquid service. Subpart H. [40 CFR 63.164(c)]

415 Compressors: Equip each barrier fluid system as described in 40 CFR 63.164(a) through (c) with a sensor that will detect failure of the seal system, barrier fluid system, or both. Subpart H. [40 CFR 63.164(d)]

416 Compressors (sensor): Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. Subpart H. [40 CFR 63.164(e)(2)]

417 Compressors: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.164(g)]

418 Compressors (no detectable emissions): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially and annually, and at other times requested by DEQ. Comply with this requirement instead of the requirements in 40 CFR 63.164(a) through (h). Subpart H. [40 CFR 63.164(i)(2)]

Which Months: All Year    Statistical Basis: None specified

419 Compressors (sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an alarm, unless the compressor is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under 40 CFR 63.164(e)(2), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.164(g). Subpart H. [40 CFR 63.164]

Which Months: All Year    Statistical Basis: None specified

420 Pressure relief device in gastavapor service: Organic HAP < 500 ppm above background except during pressure releases, as determined by the method specified in 63.180(c). Subpart H. [40 CFR 63.165(a)]

Which Months: All Year    Statistical Basis: None specified

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- 421 Pressure relief devices in gas/vapor service: After each pressure release, return to a condition indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.165(b)(1)
- 422 Pressure relief devices in gas/vapor service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) after the pressure release and being returned to organic HAP service, to confirm the condition indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 63.180(c). Subpart H. [40 CFR 63.165(b)(2)]
- Which Months: All Year   Statistical Basis: None specified
- 423 Pressure relief devices in gas/vapor service (rupture disk): After each pressure release, install a new rupture disk upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.165(a) and (b). Subpart H. [40 CFR 63.165(d)(2)]
- 424 Sampling connection systems: Equip with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 63.162(b). Operate the system as specified in 40 CFR 63.166(b). Subpart H. [40 CFR 63.166]
- 425 Open-ended valves or lines: Equip with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 63.162(b) and 40 CFR 63.167(d) and (e). Ensure that the cap, blind flange, plug or second valve seals the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. Operate each open-ended valve or line equipped with a second valve in a manner such that the valve on the process fluid end is closed before the second valve is closed. Subpart H. [40 CFR 63.167]
- 426 Valves in gas/vapor service or light liquid service (Phase I): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]
- Which Months: All Year   Statistical Basis: None specified
- 427 Valves in gas/vapor service or light liquid service (Phase II): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.168(f). Subpart H. [40 CFR 63.180(b)]. If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]
- Which Months: All Year   Statistical Basis: None specified
- 428 Valves in gas/vapor service or light liquid service (Phase III, 2 percent or greater leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly, as specified in 40 CFR 63.180(b); or implement a quality improvement program for valves that complies with the requirements of 40 CFR 63.175 and monitor quarterly. If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). If electing to implement a quality improvement program, follow the procedures in 40 CFR 63.175. Subpart H. [40 CFR 63.168(d)(1)]
- Which Months: All Year   Statistical Basis: None specified
- 429 Valves in gas/vapor service or light liquid service (Phase III, less than 2 percent leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Permittee may elect to comply with the alternate standards in 40 CFR 63.168(d)(3) and (d)(4). Subpart H. [40 CFR 63.168(d)(2)]
- Which Months: All Year   Statistical Basis: None specified
- 430 Valves in gas/vapor service or light liquid service: Determine percent leaking valves using the equation in 40 CFR 63.168(e)(1). Subpart H. [40 CFR 63.168(e)(1)]
- 431 Valves in gas/vapor service or light liquid service (after leak repair): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within three months (at least) after repair to determine whether the valve has resumed leaking. Subpart H. [40 CFR 63.168(f)(3)]
- Which Months: All Year   Statistical Basis: None specified
- 432 Valves in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repair, no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.168(f)]
- 433 Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.168(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(h)(1)]

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- 434 Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the valves as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(f)(2)]
- Which Months: All Year Statistical Basis: None specified
- 435 Valves in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d).
- Subpart H. [40 CFR 63.168(i)(1)]
- 436 Valves in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the valves at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d). Subpart H. [40 CFR 63.168(i)(3)]
- Which Months: All Year Statistical Basis: None specified
- 437 Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) if evidence of a potential leak to the atmosphere is found by visible, audible, olfactory, or any other detection method. If a reading of 10,000 ppm for agitators, 5,000 ppm for pumps handling polymerizing monomers, 2,000 ppm for all other pumps (including pumps in food/medical service), or 500 ppm for valves, connectors, instrumentation systems, and pressure relief devices, or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.169(c). Subpart H. [40 CFR 63.169(a)]
- Which Months: All Year Statistical Basis: None specified
- 438 Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.169(c)]
- 439 Surge control vessels and bottoms receivers: Equip with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements of 40 CFR 63.172, except as provided in 40 CFR 63.162(b), or comply with the requirements of 40 CFR 63.119(b) or (c), if surge control vessel or bottoms receiver is not routed back to the process and meets the conditions specified in 40 CFR 63.172(h) Table 2 or Table 3.
- Subpart H. [40 CFR 63.170]
- 440 Closed-vent system (hard-piping): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(i)]
- Which Months: All Year Statistical Basis: None specified
- 441 Closed-vent system (hard-piping): Presence of a leak monitored by visual, audible, and/or olfactory annually. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(ii)]
- Which Months: All Year Statistical Basis: None specified
- 442 Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(i)]
- Which Months: All Year Statistical Basis: None specified
- 443 Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(ii)]
- Which Months: All Year Statistical Basis: None specified

## **SPECIFIC REQUIREMENTS**

**AI ID:** 1136 - Shell Chemical Co - Geismar Plant

**Activity Number:** PER20050033

**Permit Number:** 2057-V3

**Air - Title V Regular Permit Renewal**

### **FUG004      55D-88, Fugitive Emissions EG2**

- 444 Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.172(i). Subpart H. [40 CFR 63.172(h)]
- 445 Closed-vent system (bypass lines): Flow monitored by flow indicator once every 15 minutes. Install flow indicator at the entrance to any bypass line. Subpart H. [40 CFR 63.172(j)(1)]
- Which Months: All Year   Statistical Basis: None specified
- 446 Closed-vent system (bypass lines): Flow recordkeeping by electronic or hard copy once every 15 minutes. Generate records as specified in 40 CFR 63.118(a)(3). Subpart H. [40 CFR 63.172(j)(1)]
- 447 Closed-vent system (bypass lines): Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Subpart H. [40 CFR 63.172(j)(2)]
- 448 Closed-vent system (bypass lines): Seal or closure mechanism monitored by visual inspection/determination monthly to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. Subpart H. [40 CFR 63.172(j)(2)]
- Which Months: All Year   Statistical Basis: None specified
- 449 Closed-vent system (unsafe-to-inspect): Demonstrate that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential dangers as a consequence of complying with 40 CFR 63.172(f)(1) or (f)(2). Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(1)]
- 450 Closed-vent system (unsafe-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times, but not more frequently than annually. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(2)]
- Which Months: All Year   Statistical Basis: None specified
- 451 Closed-vent system (difficult-to-inspect): Demonstrate that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(l)(1)]
- 452 Closed-vent system (difficult-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every five years. Maintain a written plan that requires inspection of the equipment at least once every five years. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(l)(2)]
- 453 Ensure that the closed-vent system or control device is operating whenever organic HAP emissions are vented to the closed-vent system or control device. Subpart H. [40 CFR 63.172(m)]
- 454 Agitators in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(a)]
- Which Months: All Year   Statistical Basis: None specified
- 455 Agitators in gas/vapor service or light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar) for indications of liquids dripping from the agitator. If there are indications of liquids dripping from the agitator, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(b)]
- Which Months: All Year   Statistical Basis: None specified
- 456 Agitators in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.173(c)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

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Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **FUG004      55D-88, Fugitive Emissions EG2**

457 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the agitator stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(1)]

458 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid organic HAP service. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(2)]

459 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(3)]

460 Agitators in gas/vapor service or light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the agitator seal. If there are indications of liquid dripping from the agitator seal at the time of the weekly inspection, monitor the agitator as specified in 40 CFR 63.180(b) to determine the presence of organic HAP in the barrier fluid. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(4)]

Which Months: All Year      Statistical Basis: None specified

461 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience; criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)(i)]

462 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 1.5 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)]

463 Agitators in gas/vapor service or light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the agitator is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.173(d)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)]

Which Months: All Year      Statistical Basis: None specified

464 Agitators in gas/vapor service or light liquid service (unmanned plant site): Presence of a leak monitored by visual inspection/determination at the regulation's specified frequency. Monitor each agitator as often as practicable and at least monthly. Comply with this requirement instead of the weekly visual inspection requirement of 40 CFR 63.173(b)(1) and (d)(4), and the daily requirements of 40 CFR 63.173(d)(5). Subpart H. [40 CFR 63.173(g)].

Which Months: All Year      Statistical Basis: None specified

465 Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the agitator cannot be monitored without elevating the monitoring personnel more than two meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(1)]

466 Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the agitator at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(3)]

Which Months: All Year      Statistical Basis: None specified

467 Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the agitator is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(1)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### FUG004 Fugitive Emissions EG2

- 468 Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the agitator as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(2)]
- Which Months: All Year Statistical Basis: None specified
- 469 Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within 12 months after the compliance date, except as provided in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(1)]
- Which Months: All Year Statistical Basis: None specified
- 470 Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within the first 12 months after initial startup or by no later than 12 months after the date of promulgation of a specific subpart that references 40 CFR 63 Subpart H, whichever is later, except as specified in 40 CFR 63.174(l) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(2)]
- Which Months: All Year Statistical Basis: None specified
- 471 Connectors in gas/vapor service or light liquid service (less than 0.5% leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Subpart H. [40 CFR 63.174(b)(3)(i)]
- Which Months: All Year Statistical Basis: None specified
- 472 Connectors in gas/vapor service or light liquid service (less than 0.5% leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every two years. Subpart H. [40 CFR 63.174(b)(3)(ii)]
- Which Months: All Year Statistical Basis: None specified
- 473 Connectors in gas/vapor service or light liquid service (opened or otherwise had the seal broken): Presence of a leak monitored by 40 CFR 60, Appendix A, Method 21 within three months after being returned to organic HAP service or when it is reconnected. If monitoring detects a leak, repair according to the provisions of 40 CFR 63.174(d), as specified, except as provided in 40 CFR 63.174(c)(1)(ii). Subpart H. [40 CFR 63.174(c)(1)(ii)]
- Which Months: All Year Statistical Basis: None specified
- 474 Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Comply with the requirements of 40 CFR 63.169. Subpart H. [40 CFR 63.174(c)(2)(i)]
- 475 Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Organic HAP monitored by technically sound method within three months after being returned to organic HAP service after having been opened or otherwise had the seal broken. If monitoring detects a leak, implement repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(c)(2)(ii)]
- Which Months: All Year Statistical Basis: None specified
- 476 Connectors in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Subpart H. [40 CFR 63.174(d)]
- 477 Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(a) through (c). Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(1)]
- 478 Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of connectors as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(2)]
- Which Months: All Year Statistical Basis: None specified

## **SPECIFIC REQUIREMENTS**

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033  
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Air - Title V Regular Permit Renewal

### **FUG004 55D-88, Fugitive Emissions EG2**

- 479 Connectors in gas/vapor service or light liquid service (*unsafe-to-repair*): Demonstrate that repair personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.174(d). Comply with this requirement instead of the requirements in 40 CFR 63.174(a), (d), and (e). Subpart H. [40 CFR 63.174(g)]
- 480 Connectors in gas/vapor service or light liquid service (inaccessible, ceramic, or ceramic-lined): Make a first attempt at repair within 5 days after leak is detected by visual, audible, olfactory or other means, and complete repairs no later than 15 calendar days after leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Comply with this requirement instead of the monitoring requirements of 40 CFR 63.174(a) and (c) and from the recordkeeping and reporting requirements of 40 CFR 63.181 and 63.182.  
Subpart H. [40 CFR 63.174(h)(2)]
- 481 Connectors in gas/vapor service or light liquid service: Calculate percent leaking connectors as specified in 40 CFR 63.174(i)(1) and (i)(2). Subpart H. [40 CFR 63.174(i)]
- 482 Comply with the test methods and procedures requirements provided in 40 CFR 63.180. Subpart H. [40 CFR 63.180]
- 483 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records as specified in 40 CFR 63.181(a) through (k).  
Subpart H. [40 CFR 63.181]
- 484 Permittee shall comply with all the applicable requirements of recordkeeping and reporting as per 40 CFR 63.181 and 182. VOHAP (surrogate for HAP) recordkeeping by inspection records as needed. [40 CFR 63.181 and 18]
- 485 Submit Initial Notification: Due within 120 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(b)(1). Subpart H. [40 CFR 63.182(b)]
- 486 Submit application: Due as soon as practicable before the construction or reconstruction is planned to commence (but it need not be sooner than 90 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H). Submit application for approval of construction or reconstruction required by 40 CFR 63.5(d) in lieu of the Initial Notification. Subpart H. [40 CFR 63.182(b)]
- 487 Submit Initial Notification: Due within 90 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(b)(1). Subpart H. [40 CFR 63.182(b)]
- 488 Submit Notification of Compliance Status: Due within 90 days of the compliance dates specified in the 40 CFR 63 subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(c)(1) through (c)(3). Subpart H. [40 CFR 63.182(c)]
- 489 Submit Periodic Reports: Due semiannually starting 6 months after the Notification of Compliance Status, as required in 40 CFR 63.182(c). Include the information specified in 40 CFR 63.182(d)(2) through (d)(4). Subpart H. [40 CFR 63.182(d)]

### **FUG005 55E-88, Fugitive Emissions EO/EG Tank Farm**

- 490 Equip all rotary pumps and compressors handling volatile organic compounds having a true vapor pressure of 1.5 psia or greater at handling conditions with mechanical seals or other equivalent equipment. [LAC 33.III.2111]
- 491 Compliance with all the applicable requirements of NESHAP, 40 CFR 63, Subpart H is considered compliance with all the applicable requirements of LAC 33.III.2122. [LAC 33.III.2122]
- 492 Permittee shall comply with the requirements of 40 CFR 63, Subpart F and H plus the dual mechanical seals on EO pumps as per Order No. AE-O-94-0132 dated 9/25/1994. Constitutes MACT. [LAC 33.III.5109, A]
- 493 Identify each piece of equipment in a process unit such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H. Subpart H. [40 CFR 63.162(c)]
- 494 Clearly identify leaking equipment, for leaking equipment detected as specified in 40 CFR 63.163, 40 CFR 63.164, 40 CFR 63.168, 40 CFR 63.169, and 40 CFR 63.172 through 63.174. The identification may be removed after the equipment is repaired, except for valves or for connectors subject to 40 CFR 63.174(c)(1)(i). The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 63.175(e)(i)(D), and no leak has been detected during the follow-up monitoring. If electing to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring. Subpart H. [40 CFR 63.162(f)]

## **SPECIFIC REQUIREMENTS**

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **FUG005      55E-88, Fugitive Emissions EO/EG Tank Farm**

495 Pumps in light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, except as provided in 40 CFR 63.162(h) and 63.163(e) through (i). If a reading of 10,000 ppm (phase I); 5,000 ppm (phase II); or 5,000 ppm (phase III, pumps handling polymerizing monomers), 2,000 ppm (Phase III, pumps in food/medical service), or 1,000 ppm (phase III, all other pumps) or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(1)]

496 Pumps in light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected. If a leak is detected, initiate the repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(3)]

497 Pumps in light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.163(c)(3) and 40 CFR 63.171. Subpart H. [40 CFR 63.163(c)]

498 Pumps in light liquid service: Implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176, if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak. Subpart H. [40 CFR 63.163(d)(2)]

499 Pumps in light liquid service: Determine percent leaking pumps using the equation in 40 CFR 63.163(d)(4). Subpart H. [40 CFR 63.163(d)(4)]

500 Pumps in light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-loop system that purges the barrier fluid into a process stream. Comply with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(1)]

501 Pumps in light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid service. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(2)]

502 Pumps in light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(3)]

503 Pumps in light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquid dripping from the pump seal at the time of the weekly inspection, monitor the pump as specified in 40 CFR 63.180(b) to determine if there is a leak of organic HAP in the barrier fluid. If an instrument reading of 1,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(4)]

504 Pumps in light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)(i)]

505 Pumps in light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)]

506 Pumps in light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the pump is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.163(e)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)]

Which Months: All Year    Statistical Basis: None specified

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **FUG005      55E-88, Fugitive Emissions EO/EG Tank Farm**

507 Pumps in light liquid service (unmanned plant site): Presence of a leak monitored by visual inspection/determination at the regulation's specified frequency. Monitor each pump as often as practicable and at least monthly. Comply with this requirement instead of the weekly visual inspection requirement of 40 CFR 63.163(b)(3) and (c)(4), and the daily requirements of 40 CFR 63.163(e)(5). Subpart H. [40 CFR 63.163(h)]

Which Months: All Year      Statistical Basis: None specified  
508 Pumps in light liquid service (unsafe-to-monitor): Determine that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.163(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(1)]

509 Pumps in light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(2)]

Which Months: All Year      Statistical Basis: None specified  
510 Compressors: Equip with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR 63.162(b) and 40 CFR 63.164(h) and (i). Subpart H. [40 CFR 63.164(a)]

511 Compressors: Operate the seal system with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equip with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid directly into a process stream. Subpart H. [40 CFR 63.164(b)]

512 Compressors: Ensure that the barrier fluid is not in liquid service. Subpart H. [40 CFR 63.164(c)]

513 Compressors: Equip each barrier fluid system as described in 40 CFR 63.164(a) through (c) with a sensor that will detect failure of the seal system, barrier fluid system, or both. Subpart H. [40 CFR 63.164(d)]

514 Compressors (sensor): Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. Subpart H. [40 CFR 63.164(e)(2)]

515 Compressors: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.164(g)]

516 Compressors (no detectable emissions): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially and annually, and at other times requested by DEQ. Comply with this requirement instead of the requirements in 40 CFR 63.164(a) through (h). Subpart H. [40 CFR 63.164(i)(2)]

Which Months: All Year      Statistical Basis: None specified  
517 Compressors (sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an alarm, unless the compressor is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under 40 CFR 63.164(e)(2), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.164(g). Subpart H. [40 CFR 63.164]

Which Months: All Year      Statistical Basis: None specified  
518 Pressure relief device in gas/vapor service: Organic HAP < 500 ppm above background except during pressure releases, as determined by the method specified in 63.180(c). Subpart H. [40 CFR 63.165(a)]

Which Months: All Year      Statistical Basis: None specified  
519 Pressure relief devices in gas/vapor service: After each pressure release, return to a condition indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.165(b)(1)]

520 Pressure relief devices in gas/vapor service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) after the pressure release and being returned to organic HAP service, to confirm the condition indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 63.180(c). Subpart H. [40 CFR 63.165(b)(2)]  
Which Months: All Year      Statistical Basis: None specified

## **SPECIFIC REQUIREMENTS**

**AI ID:** 1136 - Shell Chemical Co - Geismar Plant

**Activity Number:** PER20050033

**Permit Number:** 2057-V3

**Air - Title V Regular Permit Renewal**

### **FUG005      55E-88, Fugitive Emissions EO/EG Tank Farm**

- 521 Pressure relief devices in gas/vapor service (rupture disk): After each pressure release, install a new rupture disk upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.165(a) and (b). Subpart H. [40 CFR 63.165(d)(2)]
- 522 Sampling connection systems: Equip with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 63.162(b). Operate the system as specified in 40 CFR 63.166(b). Subpart H. [40 CFR 63.166]
- 523 Open-ended valves or lines: Equip with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 63.162(b) and 40 CFR 63.167(d) and (e). Ensure that the cap, blind flange, plug or second valve seals the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. Operate each open-ended valve or line equipped with a second valve in a manner such that the valve on the process fluid end is closed before the second valve is closed. Subpart H. [40 CFR 63.167]
- 524 Valves in gas/vapor service or light liquid service (Phase I): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]
- Which Months: All Year    Statistical Basis: None specified
- 525 Valves in gas/vapor service or light liquid service (Phase II): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]
- Which Months: All Year    Statistical Basis: None specified
- 526 Valves in gas/vapor service or light liquid service (Phase III, 2 percent or greater leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly, as specified in 40 CFR 63.180(b); or implement a quality improvement program for valves that complies with the requirements of 40 CFR 63.175 and monitor quarterly. If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). If electing to implement a quality improvement program, follow the procedures in 40 CFR 63.175. Subpart H. [40 CFR 63.168(d)(1)]
- Which Months: All Year    Statistical Basis: None specified
- 527 Valves in gas/vapor service or light liquid service (Phase III, less than 2 percent leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Permittee may elect to comply with the alternate standards in 40 CFR 63.168(d)(3) and (d)(4). Subpart H. [40 CFR 63.168(d)(2)]
- Which Months: All Year    Statistical Basis: None specified
- 528 Valves in gas/vapor service or light liquid service (after leak repair): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within three months (at least) after repair to determine whether the valve has resumed leaking. Subpart H. [40 CFR 63.168(f)(3)]
- Which Months: All Year    Statistical Basis: None specified
- 529 Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate percent leaking valves using the equation in 40 CFR 63.168(e)(1). Subpart H. [40 CFR 63.168(e)(1)]
- 530 Valves in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.168(f)]
- 531 Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.168(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(h)(1)]
- 532 Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the valves as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(h)(2)]
- Which Months: All Year    Statistical Basis: None specified

## SPECIFIC REQUIREMENTS

AIID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **FUG005      55E-88, Fugitive Emissions EO/EG Tank Farm**

- 533 Valves in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d).  
Subpart H. [40 CFR 63.168(i)(1)]
- 534 Valves in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the valves at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d). Subpart H. [40 CFR 63.168(i)(3)]
- Which Months: All Year      Statistical Basis: None specified  
Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) if evidence of a potential leak to the atmosphere is found by visible, audible, olfactory, or any other detection method. If a reading of 10,000 ppm for agitators, 5,000 ppm for pumps handling polymerizing monomers, 2,000 ppm for all other pumps (including pumps in food/medical service), or 500 ppm for valves, connectors, instrumentation systems, and pressure relief devices, or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.169(c). Subpart H. [40 CFR 63.169(a)]
- 535 Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.169(c)]
- 536 Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Equip with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements of 40 CFR 63.172, except as provided in 40 CFR 63.162(b), or comply with the requirements of 40 CFR 63.119(b) or (c), if surge control vessel or bottoms receiver is not routed back to the process and meets the conditions specified in 40 CFR 63. Subpart H. [40 CFR 63.170]
- 537 Surge control vessels and bottoms receivers: Closed-vent system (hard-piping): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(i)]
- 538 Closed-vent system (hard-piping): Presence of a leak monitored by visual, audible, and/or olfactory annually. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(ii)]
- 539 Closed-vent system (hard-piping): Statistical Basis: None specified  
Which Months: All Year      Statistical Basis: None specified  
63.172(h). Subpart H. [40 CFR 63.172(f)(1)(iii)]
- 540 Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(i)]
- 541 Closed-vent system (duct work): Statistical Basis: None specified  
Which Months: All Year      Statistical Basis: None specified  
63.172(f)(2)(ii)]
- 542 Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.172(i). Subpart H. [40 CFR 63.172(h)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### FUG005      55E-88, Fugitive Emissions EO/EG Tank Farm

- 543 Closed-vent system (bypass lines): Flow monitored by flow indicator once every 15 minutes. Install flow indicator at the entrance to any bypass line. Subpart H. [40 CFR 63.172(j)(1)]  
Which Months: All Year    Statistical Basis: None specified
- 544 Closed-vent system (bypass lines): Flow recordkeeping by electronic or hard copy once every 15 minutes. Generate records as specified in 40 CFR 63.118(a)(3). Subpart H. [40 CFR 63.172(j)(1)]
- 545 Closed-vent system (bypass lines): Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Subpart H. [40 CFR 63.172(j)(2)]
- 546 Closed-vent system (bypass lines): Seal or closure mechanism monitored by visual inspection/determination monthly to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. Subpart H. [40 CFR 63.172(j)(2)]  
Which Months: All Year    Statistical Basis: None specified
- 547 Closed-vent system (unsafe-to-inspect): Demonstrate that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with 40 CFR 63.172(f)(1) or (f)(2). Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(1)]
- 548 Closed-vent system (unsafe-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires inspection of the equipment as practicable during safe-to-inspect times, but not more frequently than annually. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(2)]  
Which Months: All Year    Statistical Basis: None specified
- 549 Closed-vent system (difficult-to-inspect): Demonstrate that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(1)]
- 550 Closed-vent system (difficult-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every five years. Maintain a written plan that requires inspection of the equipment at least once every five years. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(l)(2)]  
Which Months: All Year    Statistical Basis: None specified
- 551 Ensure that the closed-vent system or control device is operating whenever organic HAP emissions are vented to the closed-vent system or control device. Subpart H. [40 CFR 63.172(m)]
- 552 Agitators in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(a)]  
Which Months: All Year    Statistical Basis: None specified
- 553 Agitators in gas/vapor service or light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar) for indications of liquids dripping from the agitator. If there are indications of liquids dripping from the agitator, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(b)]
- 554 Agitators in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.173(c)]
- 555 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the agitator stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(1)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

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Air - Title V Regular Permit Renewal

### FUG005      55E-88, Fugitive Emissions EO/EG Tank Farm

- 556 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid organic HAP service. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(2)]
- 557 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(3)]
- 558 Agitators in gas/vapor service or light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the agitator seal. If there are indications of liquid dripping from the agitator seal at the time of the weekly inspection, monitor the agitator as specified in 40 CFR 63.180(b) to determine the presence of organic HAP in the barrier fluid. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(4)]
- 559 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)(i)]
- 560 Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)]
- 561 Agitators in gas/vapor service or light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the agitator is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.173(d)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)]
- 562 Agitators in gas/vapor service or light liquid service (unmanned plant site): Presence of a leak monitored by visual inspection/determination at the regulation's specified frequency. Monitor each agitator as often as practicable and at least monthly. Comply with this requirement instead of the weekly visual inspection requirement of 40 CFR 63.173(b)(1) and (d)(4), and the daily requirements of 40 CFR 63.173(d)(5). Subpart H. [40 CFR 63.173(g)]
- 563 Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the agitator cannot be monitored without elevating the monitoring personnel more than two meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(1)]
- 564 Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the agitator at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(3)]
- 565 Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the agitator is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(1)]
- 566 Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the agitator as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(2)]
- Which Months: All Year    Statistical Basis: None specified
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## **SPECIFIC REQUIREMENTS**

**AI ID:** 1136 - Shell Chemical Co - Geismar Plant  
**Activity Number:** PER20050033  
**Permit Number:** 2057-V3  
**Air - Title V Regular Permit Renewal**

### **FUG005      55E-88, Fugitive Emissions EO/EG Tank Farm**

- 567 Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within 12 months after the compliance date, except as provided in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(1)]
- Which Months: All Year      Statistical Basis: None specified
- 568 Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within the first 12 months after initial startup or by no later than 12 months after the date of promulgation of a specific subpart that references 40 CFR 63. Subpart H, whichever is later, except as specified in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(2)]
- Which Months: All Year      Statistical Basis: None specified
- 569 Connectors in gas/vapor service or light liquid service (0.5% or greater leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Subpart H. [40 CFR 63.174(b)(3)(i)]
- Which Months: All Year      Statistical Basis: None specified
- 570 Connectors in gas/vapor service or light liquid service (less than 0.5% leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every two years. Subpart H. [40 CFR 63.174(b)(3)(ii)]
- Which Months: All Year      Statistical Basis: None specified
- 571 Connectors in gas/vapor service or light liquid service (opened or otherwise had the seal broken): Presence of a leak monitored by 40 CFR 60, Appendix A, Method 21 within three months after being returned to organic HAP service or when it is reconnected. If monitoring detects a leak, repair according to the provisions of 40 CFR 63.174(d), as specified, except as provided in 40 CFR 63.174(c)(1)(ii). Subpart H. [40 CFR 63.174(c)(1)(i)]
- Which Months: All Year      Statistical Basis: None specified
- 572 Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Comply with the requirements of 40 CFR 63.169. Subpart H. [40 CFR 63.174(c)(2)(i)]
- 573 Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Organic HAP monitored by technically sound method within three months after being returned to organic HAP service after having been opened or otherwise had the seal broken. If monitoring detects a leak, implement repair provisions in 40 CFR 63.174(c)(2)(i)]
- Which Months: All Year      Statistical Basis: None specified
- 574 Connectors in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171 and 63.174(e). Subpart H. [40 CFR 63.174(d)]
- 575 Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(a) through (c). Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(1)]
- 576 Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of connectors as frequently as practicable during safe to monitor times, but not more frequently than the periodic schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(2)]
- Which Months: All Year      Statistical Basis: None specified
- 577 Connectors in gas/vapor service or light liquid service (unsafe-to-repair): Demonstrate that repair personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.174(d). Comply with this requirement instead of the requirements in 40 CFR 63.174(a), (d), and (e). Subpart H. [40 CFR 63.174(g)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

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### **FUG005      55E-388, Fugitive Emissions EO/EG Tank Farm**

578 Connectors in gas/vapor service or liquid service (inaccessible, ceramic, or ceramic-lined): Make a first attempt at repair within 5 days after leak is detected by visual, audible, olfactory or other means, and complete repairs no later than 15 calendar days after leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Comply with this requirement instead of the monitoring requirements of 40 CFR 63.174(a) and (c) and from the recordkeeping and reporting requirements of 40 CFR 63.181 and 63.182.  
Subpart H. [40 CFR 63.174(h)(2)]

579 Connectors in gas/vapor service or liquid service: Calculate percent leaking connectors as specified in 40 CFR 63.174(i)(1) and (i)(2). Subpart H. [40 CFR 63.174(i)]

580 Comply with the test methods and procedures requirements provided in 40 CFR 63.180. Subpart H. [40 CFR 63.180]

581 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records as specified in 40 CFR 63.181(a) through (k).  
Subpart H. [40 CFR 63.181]

582 Permittee shall comply with all the applicable requirements of recordkeeping and reporting as per 40 CFR 63.181 and 182. VOHAP (surrogate for HAP) recordkeeping by inspection records as needed. [40 CFR 63.181 and 18]

583 Submit Initial Notification: Due within 120 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(b)(1). Subpart H. [40 CFR 63.182(b)]

584 Submit application: Due as soon as practicable before the construction or reconstruction is planned to commence (but it need not be sooner than 90 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H). Submit application for approval of construction or reconstruction required by 40 CFR 63.5(d) in lieu of the Initial Notification. Subpart H. [40 CFR 63.182(b)]

585 Submit Initial Notification: Due within 90 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(b)(1). Subpart H. [40 CFR 63.182(b)]

586 Submit Notification of Compliance Status: Due within 90 days of the compliance dates specified in the 40 CFR 63 subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(c)(1) through (c)(3). Subpart H. [40 CFR 63.182(c)]

587 Submit Periodic Reports: Due semiannually starting 6 months after the Notification of Compliance Status, as required in 40 CFR 63.182(c). Include the information specified in 40 CFR 63.182(d)(2) through (d)(4). Subpart H. [40 CFR 63.182(d)]

### **GRP028      EOEG-2 Facility**

588 Emissions of smoke which pass onto or across a public road and create a traffic hazard by impairment of visibility as defined in LAC 33:III.111 or intensify an existing traffic hazard condition are prohibited. [LAC 33:III.1103]

589 Outdoor burning of waste material or other combustible material is prohibited. [LAC 33:III.1109.B]

590 Emissions of particulate matter which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited. [LAC 33:III.1303.B]

591 Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.1-7. [LAC 33:III.1305]

592 Equipment/operational data recordkeeping by electronic or hard copy continuously. Record and keep on site for at least two years the data required to demonstrate exemption from the provisions of LAC 33:III. Chapter 15. Record all emissions data in the units of the standard using the averaging time of the standard. Make records available to a representative of DEQ or the U.S. EPA on request. [LAC 33:III.1513]

593 Maintain best practical housekeeping and maintenance practices at the highest possible standards to reduce the quantity of organic compounds emissions. Good housekeeping shall include, but not be limited to, the practices listed in LAC 33:III.2113.A.1-5. [LAC 33:III.2113.A]

594 Failure to pay the prescribed application fee or annual fee as provided herein, within 90 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement actions under the Louisiana Environmental Quality Act including, but not limited to, revocation or suspension of the applicable permit, license, registration, or variance. [LAC 33:III.219]

## **SPECIFIC REQUIREMENTS**

**AI ID: 1136 - Shell Chemical Co - Geismar Plant**

**Activity Number: PER20050033**

**Permit Number: 2057-V3**

**Air - Title V Regular Permit Renewal**

### **GRP028 EOEG-2 Facility**

- 595 Do not fire an affected point source with Number 6 Fuel Oil or perform testing of emergency and training combustion units without prior approval of DEQ on a day that is designated as an Ozone Action Day by DEQ. [LAC 33:III.2201.D.9]
- 596 Establish an emission factor for each applicable affected point source such that if each affected point sources was operated at its averaging capacity, the cumulative emission factor in pounds NO<sub>x</sub>/MMBtu from all point sources in the averaging group would not exceed the facility-wide emission factor. Use the equations in LAC 33:III.2201.E. to calculate the cumulative emission rate and the facility-wide emission factor. [LAC 33:III.2201.E.1.a]
- 597 Include in the submitted plan a description of the actions that will be taken if any under-controlled unit is operated at more than 10 percent above its averaging capacity. [LAC 33:III.2201.E.1.d]
- 598 Comply with the facility-wide averaging plan as approved by DEQ. [LAC 33:III.2201.E.1.]
- 599 Submit a request for approval to use a facility-wide averaging plan, that includes the details of the plan, to DEQ either separately or with the permit application or in the optional compliance plan described in LAC 33:III.2201.F.7. [LAC 33:III.2201.E.1.]
- 600 Perform NO<sub>x</sub> emissions testing for all point sources that are subject to the emission limitations of LAC 33:III.2201.D or used in one of the alternative plans of LAC 33:III.2201.E, as specified in LAC 33:III.2201.G.2 through G.7. Test results must demonstrate that actual NO<sub>x</sub> emissions are in compliance with the appropriate limits of LAC 33:III Chapter 22. Also measure CO, SO<sub>2</sub>, PM10, and VOC if modifications could cause an increase in emissions of any of these compounds. [LAC 33:III.2201.G.2]
- 601 Modify and/or install and bring into normal operation NO<sub>x</sub> control equipment and/or NO<sub>x</sub> monitoring systems in accordance with LAC 33:III.Chapter 22 as expeditiously as possible, but by no later than May 1, 2005, except as provided in LAC 33:III.2202. [LAC 33:III.2201.J.1.]
- 602 Complete all initial compliance testing, specified by LAC 33:III.2201.G, for equipment modified with NO<sub>x</sub> reduction controls or a NO<sub>x</sub> monitoring system to meet the provisions of LAC 33:III.Chapter 22 within 60 days of achieving normal production rate or after the end of the shake down period, but in no event later than 180 days after initial start-up, except as provided in LAC 33:III.2202. [LAC 33:III.2201.J.2.]
- 603 Complete required testing to demonstrate the performance of existing, unmodified equipment in a timely manner, but by no later than November 1, 2005, except as provided in LAC 33:III.2202. [LAC 33:III.2201.J.2.]
- 604 Discharges of odorous substances at or beyond property lines which cause a perceived odor intensity of six or greater on the specified eight point butanol scale as determined by Method 41 of LAC 33:III.2901.G are prohibited. [LAC 33:III.2901.D.]
- 605 If requested to monitor for odor intensity, take and transport samples in a manner which minimizes alteration of the samples either by contamination or loss of material. Evaluate all samples as soon after collection as possible in accordance with the procedures set forth in LAC 33:III.2901.G. [LAC 33:III.2901.F.]
- 606 Submit permit application: Due prior to construction, reconstruction or modification unless otherwise provided in LAC 33:III.Chapter 5. Submit a timely and complete permit application to the Office of Environmental Services, Permits Division as required in accordance with the procedures in LAC 33:III.Chapter 5. [LAC 33:III.501.C.1]
- 607 Maintain best practical housekeeping and maintenance practices at the highest possible standards to control emissions of highly reactive volatile organic compounds (HRVOC), which include 1,3-Butadiene, Butene, cis-2-Butene, Ethylene, Propylene, Toluene, Xylene, n-p-Xylene. [LAC 33:III.501.C.6]
- 608 Maintain, to the extent practicable, a leak-free facility taking such steps as are necessary and reasonable to prevent leaks and to expeditiously repair leaks that occur. Update the written plan presently required by LAC 33:III.2113.A.4 within 30 days of receipt of this permit to incorporate these general duty obligations into the housekeeping procedures. The plan shall then be considered a means of emission control subject to the required use and maintenance provisions of LAC 33:III.905. Failure to develop, use, and diligently maintain the plan shall be a violation of this permit. [LAC 33:III.501.C.6]
- 609 Permittee may add/replace/remove fugitive components, except compressors, at the units without triggering the need to apply for a permit modification, provided that:
- Change in components involve routine maintenance or undertaken to address safety concerns, or involve small piping revisions with no associated emission increases except from the fugitive emission component themselves; [ ]
  - The changes do not involve any associated increases in production rate or capacity, or tie in of new or modified process equipment other than the piping component;
  - Actual emissions following the changes will not exceed the emission limits contained in this permit; and;
  - The components are promptly incorporated into any applicable LDAR program. [LAC 33:III.501.C.6]

## **SPECIFIC REQUIREMENTS**

AIID: 1136 - Shell Chemical Co - Geismar Plant

Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### **GRP028 EOEG-2 Facility**

- 610 Carbon monoxide <= 12.29 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 611 Nitrogen oxides <= 4.10 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 612 Particulate matter (10 microns or less) <= 17.18 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 613 Sulfur dioxide <= 0.19 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 614 VOC, Total <= 47.03 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 615 Allyl chloride <= 0.04 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 616 Acetaldehyde <= 1.33 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 617 Ethylene glycol <= 8.72 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 618 Ethylene oxide <= 3.71 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 619 Formaldehyde <= 0.20 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 620 Methanol <= 0.91 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 621 Comply with the requirements of the Nonattainment New Source Review Program. This permit includes provisions of the Nonattainment New Source Review Procedures (NNSR) from LAC 33:III.504. [LAC 33:III.504]
- 622 Any major source as defined in LAC 33:III.502 is designated a Part 70 source and is required to obtain a permit which will meet the requirements of LAC 33:III.507. [LAC 33:III.507.A.1.a]
- 623 Any nonmajor (area) source of hazardous air pollutants required to obtain an operating permit pursuant to regulations promulgated under section 112 of the federal Clean Air Act is designated a Part 70 source and is required to obtain a permit which will meet the requirements of LAC 33:III.507. [LAC 33:III.507.A.1.b]
- 624 Any nonmajor source required to obtain an operating permit pursuant to regulations promulgated under section 111 of the federal Clean Air Act is designated a Part 70 source and is required to obtain a permit which will meet the requirements of LAC 33:III.507. [LAC 33:III.507.A.1.c]
- 625 Any affected source, as defined in LAC 33:III.502, pursuant to the acid rain provisions of title IV of the federal Clean Air Act is designated a Part 70 source and is required to obtain a permit which will meet the requirements of LAC 33:III.507. [LAC 33:III.507.A.1.d]
- 626 Any solid waste incineration unit required to obtain a permit pursuant to section 129(e) of the federal Clean Air Act is designated a Part 70 source and is required to obtain a permit which will meet the requirements of LAC 33:III.507. [LAC 33:III.507.A.1.e]

## **SPECIFIC REQUIREMENTS**

**AI ID: 1136 - Shell Chemical Co - Geismar Plant**

**Activity Number: PER20050033**

**Permit Number: 2057-V3**

**Air - Title V Regular Permit Renewal**

### **GRP028 EOEG-2 Facility**

- 627 No Part 70 source may operate after the time that the owner or operator of such source is required to submit a permit application under Subsection C of this Section, unless an application has been submitted by the submittal deadline and such application provides information addressing all applicable sections of the application form and has been certified as complete in accordance with LAC 33:III.517.B.1. No Part 70 source may operate after the deadline provided for supplying additional information requested by the permitting authority under LAC 33:III.519, unless such additional information has been submitted within the time specified by the permitting authority. Permits issued to the Part 70 source under this Section shall include the elements required by 40 CFR 70.6. The Louisiana Department of Environmental Quality hereby adopts and incorporates by reference the provisions of 40 CFR 70.6(a), as in effect on July 21, 1992. Upon issuance of the permit, the Part 70 source shall be operated in compliance with all terms and conditions of the permit. Noncompliance with any federally applicable term or condition of the permit shall constitute a violation of the Clean Air Act and shall be grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. [LAC 33:III.507.B.2]
- 628 Any Part 70 source for which construction or operation has begun prior to the effective date of LAC 33:III.507 shall submit an application for an initial Part 70 permit. Permit applications shall be prepared in accordance with LAC 33:III.517 and with forms and guidance provided by DEQ, and shall be submitted no later than one year after the effective date of the Louisiana Part 70 program. [LAC 33:III.507.C.1]
- 629 Any source which becomes subject to the requirements of LAC 33:III.507 after the effective date of the Louisiana Part 70 program due to regulations promulgated by the Environmental Protection Agency or by the Department of Environmental Quality shall submit an application to the Office of Environmental Services, Permits Division in accordance with the requirements established by the applicable regulation. In no case shall the required application be submitted later than one year from the date on which the source first becomes subject to LAC 33:III.507. [LAC 33:III.507.C.3]
- 630 Any permit application to renew an existing permit shall be submitted at least six months prior to the date of permit expiration, or at such earlier time as may be required by the existing permit or approved by the permitting authority. In no event shall the application for permit renewal be submitted more than 18 months before the date of permit expiration. [LAC 33:III.507.E.4]
- 631 No major stationary source or major modification to which the requirements of this Part apply shall begin actual construction without a permit issued under this Section. [LAC 33:III.509.I.1]
- 632 A major stationary source or major modification shall meet each applicable emissions limitation under the Louisiana State Implementation Plan and each applicable emissions standard and standard of performance under the Louisiana New Source Performance Standards (LNSPS) and Louisiana Emission Standards for Hazardous Air Pollutants (LESHAP) and Sections 111 and 112 of the Clean Air Act. [LAC 33:III.509.J.1]
- 633 A new major stationary source shall apply best available control technology for each pollutant subject to regulation under this Section that it would have the potential to emit in significant amounts. [LAC 33:III.509.J.2]
- 634 A major modification shall apply best available control technology for each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit. [LAC 33:III.509.J.3]
- 635 For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source. [LAC 33:III.509.J.4]
- 636 Do not construct or modify any stationary source subject to any standard set forth in LAC 33:III.Chapter 51.Subchapter A without first obtaining written authorization from DEQ in accordance with LAC 33:III.Chapter 51.Subchapter A, after the effective date of the standard. [LAC 33:III.5105.A.1]
- 637 Do not cause a violation of any ambient air standard listed in LAC 33:III.Table 51.2, unless operating in accordance with LAC 33:III.5109. [LAC 33:III.5105.A.2]
- 638 Do not build, erect, install, or use any article, machine, equipment, process, or method, the use of which conceals an emission that would otherwise constitute a violation of an applicable standard. [LAC 33:III.5105.A.3]
- 639 Do not fail to keep records, notify, report or revise reports as required under LAC 33:III.Chapter 51.Subchapter A. [LAC 33:III.5105.A.4]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant

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### GRP028 EOEG-2 Facility

- 652 Obtain a permit modification in accordance with LAC 33:III.5111.B and C before commencement of any modification not specified in a compliance plan submitted under LAC 33:III.5109.D, if the modification will result in an increase in emissions of any toxic air pollutant or will create a new point source. [LAC 33:III.5111.A, 2.a]
- 653 Do not commence construction or modification of any major source without first obtaining written authorization from DEQ, as specified. [LAC 33:III.5111.A]
- 654 Ensure that all testing done to determine the emission of toxic air pollutants, upon request by the department, is conducted by qualified personnel. [LAC 33:III.5113.B.1]
- 655 Submit test results: Due in writing to the Office of Environmental Assessment, Environmental Technology Division within 45 days after completion of the test. Submit test results signed by the person responsible for the test. [LAC 33:III.5113.B.1]
- 656 Conduct emission tests as set forth in accordance with Test Methods of 40 CFR, parts 60, 61, and 63 or in accordance with alternative test methods approved by DEQ. [LAC 33:III.5113.B.2]
- 657 Provide necessary sampling and testing facilities, exclusive of instruments and sensing devices, as needed to properly determine the emission of toxic air pollutants, upon request of the department. [LAC 33:III.5113.B.3]
- 658 Provide emission testing facilities as specified in LAC 33:III.5113.B.4 through e. [LAC 33:III.5113.B.4]
- 659 Analyze samples and determine emissions within 30 days after each emission test has been completed. [LAC 33:III.5113.B.5]
- 660 Submit certified letter: Due to the Office of Environmental Assessment, Environmental Technology Division before the close of business on the 45th day following the completion of the emission test. Report the determinations of the emission test. [LAC 33:III.5113.B.5]
- 661 Equipment/operational data recordkeeping by electronic or hard copy upon each occurrence of emissions testing. Retain records of emission test results and other data needed to determine emissions. Retained records at the source, or at an alternate location approved by DEQ for a minimum of two years, and make available upon request for inspection by DEQ. [LAC 33:III.5113.B.6]
- 662 Submit notification: Due to the Office of Environmental Assessment, Environmental Technology Division at least 30 days before the emission test. Submit notification of emission test to allow DEQ the opportunity to have an observer present during the test. [LAC 33:III.5113.B.7]
- 663 Maintain and operate each monitoring system in a manner consistent with good air pollution control practices for minimizing emissions. Repair or adjust any breakdown or malfunction of the monitoring system as soon as practicable after its occurrence. [LAC 33:III.5113.C.1]
- 664 Conduct performance evaluation of the monitoring system when required at any other time requested by DEQ. [LAC 33:III.5113.C.2]
- 665 Submit performance evaluation report: Due to the Office of Environmental Assessment, Environmental Technology Division within 60 days of the monitoring system performance evaluation. [LAC 33:III.5113.C.2]
- 666 Submit notification in writing: Due to the Office of Environmental Assessment, Environmental Technology Division at least 30 days before a performance evaluation of the monitoring system to begin. [LAC 33:III.5113.C.2]
- 667 Install a monitoring system on each effluent or on the combined effluent, when monitoring is required and the effluents from a single source, or from two or more sources subject to the same emission standards, are combined before being released to the atmosphere. If two or more sources are not subject to the same emission standards, install a separate monitoring system on each effluent, unless otherwise specified. If the applicable standard is a mass emission standard and the effluent from one source is released to the atmosphere through more than one point, install a monitoring system at each emission point unless DEQ approves the installation of fewer systems. [LAC 33:III.5113.C.3]
- 668 Evaluate the performance of continuous monitoring systems, upon request by DEQ, in accordance with the requirements and procedures contained in the applicable performance specification of 40 CFR Part 60, appendix B. [LAC 33:III.5113.C.5.a]
- 669 Submit report: Due to DEQ within 60 days of the performance evaluation of the CMS, if requested. Furnish DEQ with two or more copies of a written report of the test results within 60 days. [LAC 33:III.5113.C.5.a]
- 670 Install all continuous monitoring systems or monitoring devices to make representative measurements under variable process or operating parameters, if required to install a CMS. [LAC 33:III.5113.C.5.d]
- 671 Collect and reduce all data as specified in LAC 33:III.5113.C.5.e and ii, if required to install a CMS. [LAC 33:III.5113.C.5.e]

## **SPECIFIC REQUIREMENTS**

**AI ID: 1136 - Shell Chemical Co - Geismar Plant**

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### **GRP028 EOEG-2 Facility**

- 672 Submit plan: Due to the Office of Environmental Assessment, Environmental Technology Division within 90 days after DEQ requests either the initial plan or an updated plan, if required by DEQ to install a continuous monitoring system. Submit for approval a plan describing the affected sources and the methods for ensuring compliance with the continuous monitoring system. [LAC 33:III.5113.C.5]
- 673 Maintain records of monitoring data, monitoring system calibration checks, and the occurrence and duration of any period during which the monitoring system is malfunctioning or inoperative. Maintain these records at the source, or at an alternative location approved by DEQ, for a minimum of three years and make available, upon request, for inspection by DEQ. [LAC 33:III.5113.C.7]
- 674 An individual or company contracted to perform a demolition or renovation activity which disturbs RACM must be recognized by the Licensing Board for Contractors to perform asbestos abatement, and shall meet the requirements of LAC 33:III.5151.F.2 and F.3 for each demolition or renovation activity. [LAC 33:III.5151.F.1.f]
- 675 Submit permit application: Due prior to commencement of construction, reconstruction, or modification of the source, for new or modified sources. Do not commence construction, reconstruction, or modification of any source required to be permitted under LAC 33:III.Chapter 5 prior to approval by the permitting authority. [LAC 33:III.517.A.1]
- 676 Submit permit application: Due by the date established for submittal in accordance with LAC 33:III.507.C. The permit application is for an initial permit to be issued in accordance with LAC 33:III.507. Provide a copy of each permit application pertaining to a major Part 70 source to EPA at the time of application submittal to the permitting authority. [LAC 33:III.517.A.2]
- 677 Submit permit application: Due by the date established by the permitting authority. The permit application is for any source for which grandfathered status has expired due to a change in ownership. [LAC 33:III.517.A.3]
- 678 Any application form, report, or compliance certification submitted under this Chapter shall contain certification by a responsible official of truth, accuracy, and completeness. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information contained in the application are true, accurate, and complete. [LAC 33:III.517.B.1]
- 679 Submit supplementary facts or corrected information: Due promptly upon becoming aware of failure to submit or incorrect submittal regarding permit applications. In addition, provide information as necessary to address any requirements that become applicable to the source after the date of filing a complete application but prior to release of a proposed permit. [LAC 33:III.517.C]
- 680 Submit applications for permits in accordance with forms and guidance provided by the DEQ. At a minimum, each permit application submitted under LAC 33:III.Chapter 5 shall contain the information specified in LAC 33:III.517.D, subparagraphs 1-18. [LAC 33:III.517.D]
- 681 In addition to those elements listed under LAC 33:III.517.D, include in each application pertaining to a Part 70 source the information specified in LAC 33:III.517.E. Subparagraphs 1-8. [LAC 33:III.517.E]
- 682 Submit notification: Due within 90 days after any change in ownership of the source. Provide the notification in accordance with forms or guidance from the permitting authority and in accordance with requirements of LAC 33:III.1701. [LAC 33:III.517.G]
- 683 Submit permit modification application: Due within 45 days of obtaining relevant test results. The permit modification or amendment shall include all information necessary to process the request, and is required if testing demonstrates that the terms and conditions of the existing permit are inappropriate or inaccurate. [LAC 33:III.523.A]
- 684 Submit application for temporary exemption for testing: Due prior to test initiation. Submit the information specified in LAC 33:III.517 (with the exception of the data being measured in the test). Conduct testing for the minimum duration consistent with obtaining valid results. [LAC 33:III.523.B.2]
- 685 Submit test results: Due within 30 days of test completion to the administrative authority. The report details the conditions that were found to exist during a temporary exemption for testing. State if there is to be no permanent change in emissions from pretest conditions. [LAC 33:III.523.B.3]
- 686 Activate the preplanned abatement strategy listed in LAC 33:III.5611.Table 5 when the administrative authority declares an Air Pollution Alert. [LAC 33:III.5609.A.1.b]
- 687 Activate the preplanned strategy listed in LAC 33:III.5611.Table 6 when the administrative authority declares an Air Pollution Warning. [LAC 33:III.5609.A.2.b]
- 688 Activate the preplanned abatement strategy listed in LAC 33:III.5611.Table 7 when the administrative authority declares an Air Pollution Emergency. [LAC 33:III.5609.A.3.b]

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- 689 Prepare standby plans for the reduction of emissions during periods of Air Pollution Alert, Air Pollution Warning and Air Pollution Emergency. Design standby plans to reduce or eliminate emissions in accordance with the objectives as set forth in LAC 33:III.5611.Tables 5, 6, and 7. [LAC 33:III.5609.A]
- 690 Submit standby plan for the reduction or elimination of emissions during an Air Pollution Alert, Air Pollution Warning, or Air Pollution Emergency: Due within 30 days after requested by the administrative authority. [LAC 33:III.5611.A]
- 691 During an Air Pollution Alert, Air Pollution Warning or Air Pollution Emergency, make the standby plan available on the premises to any person authorized by the department to enforce these regulations. [LAC 33:III.5611.B]
- 692 Comply with the provisions in 40 CFR 68, except as specified in LAC 33:III.5901. [LAC 33:III.5901.A]
- 693 Identify hazards that may result from accidental releases of the substances listed in 40 CFR 68.130, Table 59.0 of LAC 33:III.5907, or Table 59.1 of LAC 33:III.5913 using appropriate hazard assessment techniques, design and maintain a safe facility, and minimize the off-site consequences of accidental releases of such substances that do occur. [LAC 33:III.5907]
- 694 Submit registration: Due January 31, 1998, or within 60 days after the source becomes subject to LAC 33:III.Chapter 59, whichever is later. Include the information listed in LAC 33:III.5911.B, and submit to the Department of Environmental Quality, Office of Environmental Compliance, Surveillance Division. [LAC 33:III.5911.A]
- 695 Submit amended registration: Due to the Department of Environmental Quality, Office of Environmental Compliance, Surveillance Division within 60 days after the information in the submitted registration is no longer accurate. [LAC 33:III.5911.C]
- 696 Install air pollution control facilities whenever practical, economically, and technologically feasible. When facilities have been installed on a property, use them and diligently maintain them in proper working order whenever any emissions are being made which can be controlled by the facilities, even though the ambient air quality standards in affected areas are not exceeded. [LAC 33:III.905]
- 697 Where, upon written application of the responsible person or persons, the administrative authority finds that by reason of exceptional circumstances strict conformity with any provisions of these regulations would cause undue hardship, would be unreasonable, impractical or not feasible under the circumstances, the administrative authority may permit a variance from these regulations. [LAC 33:III.917.A]
- 698 No variance may permit or authorize the maintenance of a nuisance, or a danger to public health or safety. [LAC 33:III.917.B]
- 699 Submit Emission Inventory (EI)/Annual Emissions Statement: Due annually, by the 31st of March for the period January 1 to December 31 of the previous year. Submit emission inventory data in the format specified by the Office of Environmental Assessment, Environmental Evaluation Division. Include all data applicable to the emissions source(s), as specified in LAC 33:III.919.A-D. [LAC 33:III.919.D]
- 700 Report the unauthorized discharge of any air pollutant into the atmosphere in accordance with LAC 33:I.Chapter 39, Notification Regulations and Procedures for Unauthorized Discharges. Submit written reports to the department pursuant to LAC 33:I.3925. Submit timely and appropriate follow-up reports detailing methods and procedures to be used to prevent similar atmospheric releases. [LAC 33:III.927]
- 701 All affected facilities shall comply with all applicable provisions in 40 CFR 60 Subpart A. [40 CFR 60]
- 702 Provide DEQ with written notice of intention to demolish or renovate prior to performing activities to which 40 CFR 61 Subpart M applies. Delivery of the notice by U.S. Postal Service, commercial delivery service, or hand delivery is acceptable. [40 CFR 61.145(b)(1)]
- 703 Do not install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. Subpart M. [40 CFR 61.148]
- 704 Submit report: The facility does not generate benzene waste and the the initial report was submitted on April 7, 1993 as specified in 40 CFR 61.357(a)(1). Subpart FF. [40 CFR 61.357(a)]
- 705 All affected facilities shall comply with all applicable provisions in 40 CFR 61 Subpart A. [40 CFR 61]
- 706 All affected facilities shall comply with all applicable provisions in 40 CFR 63 Subpart A. [40 CFR 63]
- 707 Submit Title V permit application for renewal: Due 180 calendar days before permit expiration date. [40 CFR 70.5(a)(1)(iii)]

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AI ID: 1136 - Shell Chemical Co - Geismar Plant

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### **GRP028 EOEG-2 Facility**

- 708 Submit Title V monitoring results report. Due semiannually, by March 31st and September 30th for the preceding periods encompassing July through December and January through June, respectively. Submit reports to the Office of Environmental Compliance, Surveillance Division. Certify reports by a responsible company official. Clearly identify all instances of deviations from permitted monitoring requirements. For previously reported deviations, in lieu of attaching the individual deviation reports, clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. [40 CFR 70.6(a)(3)(iii)(A)]
- 709 Submit Title V excess emissions report: Due quarterly, by June 30, September 30, December 31, March 31. Submit reports of all permit deviations to the Office of Environmental Compliance, Surveillance Division. Certify all reports by a responsible official in accordance with 40 CFR 70.5(d). The reports submitted on March 31 and September 30 may be consolidated with the semi-annual reports required by 40 CFR 70.6(a)(3)(iii)(A) as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. [40 CFR 70.6(a)(3)(iii)(B)]
- 710 Submit Title V compliance certification: Due annually, by the 31st of March. Submit to the Office of Environmental Compliance, Surveillance Division. [40 CFR 70.6(c)(5)(iv)]
- 711 Comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82. Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B. [40 CFR 82.Subpart F]

### **RLP028 17-96, A-EG502 Contaminated Steam Vent**

- 712 Equipment/operational data recordkeeping by electronic or hard copy as needed. Maintain records to demonstrate that the criteria are being met for any exemption claimed. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request. [LAC 33:III.2115.K]
- 713 Good engineering practices and proper operation of the glycol concentrator to minimize venting is considered MACT under LAC 33:III.Chapter 51. [LAC 33:III.5109.A]

### **RLP031 20-96, EO-2 Sour Oil Gas Vent K-EO601 to atm**

- 714 Equipment/operational data recordkeeping by electronic or hard copy as needed. Maintain records to demonstrate that the criteria are being met for any exemption claimed. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request. [LAC 33:III.2115.K]
- 715 Compliance with LAC 33:III.2115 is considered MACT under LAC 33:III.5109.A. No controls required as per the requirements of LAC 33:III.2115.H.1.c. [LAC 33:III.5109.A]

### **RLP034 23A-96, EG-2 Hotwell Vent V-EG801**

- 716 Emits Class I and II pollutants less than their respective minimum Emission rate (MER). No further controls required to comply with LAC33:III.Chapter 51. [LAC 33:III.5109.A]

### **RLP035 26-98, EG2 GBF/Purif Vac Aftercond Vent E-EG801**

- 717 Compliance with all the applicable requirements of NSPS, 40 CFR 63, Subpart NNN is considered compliance with all the applicable requirements of LAC 33:III.Chapter 51. [LAC 33:III.5109.A]
- 718 TRE index value > 1 index value without use of VOC emission control device. Subpart NNN. [40 CFR 60.662(c)]  
Which Months: All Year Statistical Basis: None specified
- 719 Notify the DEQ with the specific provisions of 40 CFR 60.662 (40 CFR 60.662(a), (b), or (c)) with which the facility operator has elected to comply. Submit the notification with the notification of initial start-up required in 40 CFR 60.7(a)(3). Notify the DEQ 90 days before implementing any change in the provision of 40 CFR 60.664 within 180 days after the change. Subpart NNN. [40 CFR 60.665(a)]  
operator elects to comply with . Conduct the performance test specified by 40 CFR 60.664 within 180 days after the change. Subpart NNN. [40 CFR 60.665(a)]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033  
Permit Number: 2057-V3

### Air - Title V Regular Permit Renewal

#### RLP035 26-98, EG2 GBF/Purif Vac Aftercond Vent E-EG801

- 720 Submit report Due semiannually. Submit initial report within 6 months after the initial start-up date. Include the information outlined in 40 CFR 60.665(l)(1) through (l)(7).
- Subpart NNN. [40 CFR 60.665(l)]
- 721 TRE index value > 4.0 (no units). Subpart G. [40 CFR 63.113(e)]  
Which Months: All Year Statistical Basis: None specified
- 722 Recalculate the TRE index value, flow, or organic hazardous air pollutants concentration for each process vent, as necessary to determine whether the vent is Group 1 or Group 2, whenever process changes are made that could reasonably be expected to change the vent to a Group 1 vent. Subpart G. [40 CFR 63.115(e)]
- 723 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records of measurements, engineering assessments, and calculations performed to determine the TRE index value of the vent stream. Include all data, assumptions and procedures used for the engineering assessments, as specified in 40 CFR 63.115(d)(1). Subpart G. [40 CFR 63.117(b)]
- 724 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep up-to-date, readily accessible records of any process changes as defined in 40 CFR 63.115(e), and any recalculation of the TRE index value pursuant to 40 CFR 63.115(e). Subpart G. [40 CFR 63.118(c)]
- 725 Submit report Due within 180 calendar days after a process change, as defined in 40 CFR 63.115(e), is made that causes a Group 2 process vent with a TRE greater than 4.0 to become a Group 2 process vent with a TRE less than 4.0. Include the information specified in 40 CFR 63.118(h)(1) through (h)(3). Subpart G. [40 CFR 63.118(h)]
- 726 Shall comply with the TRE index value limit specified under 40 CFR 63.662(c) including and shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment as specified under 40 CFR 63.663(e), 40 CFR 63.664(g). [40 CFR 63.662(c), 40 CFR 63.664(g)]

#### RLP036 27-98, EG2 DEG Col Vac Aftercond Vent E-EG803

- 727 Compliance with all the applicable requirements of NESHAP, 40 CFR 63, Subpart G is considered compliance with all the applicable requirements of LAC 33:II, Chapter 5I, [LAC 33:II,5I09.A]
- 728 TRE index value > 4.0 (no units). Subpart G. [40 CFR 63.113(e)]  
Which Months: All Year Statistical Basis: None specified
- 729 Recalculate the TRE index value, flow, or organic hazardous air pollutants concentration for each process vent, as necessary to determine whether the vent is Group 1 or Group 2, whenever process changes are made that could reasonably be expected to change the vent to a Group 1 vent. Subpart G. [40 CFR 63.115(e)]
- 730 Equipment/operational data recordkeeping by electronic or hard copy continuously. Maintain records of measurements, engineering assessments, and calculations performed to determine the TRE index value of the vent stream. Include all data, assumptions and procedures used for the engineering assessments, as specified in 40 CFR 63.115(d)(1). Subpart G. [40 CFR 63.117(b)]
- 731 Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep up-to-date, readily accessible records of any process changes as defined in 40 CFR 63.115(e), and any recalculation of the TRE index value pursuant to 40 CFR 63.115(e). Subpart G. [40 CFR 63.118(c)]
- 732 Submit report Due within 180 calendar days after a process change, as defined in 40 CFR 63.115(e), is made that causes a Group 2 process vent with a TRE greater than 4.0 to become a Group 2 process vent with a TRE less than 4.0. Include the information specified in 40 CFR 63.118(h)(1) through (h)(3). Subpart G. [40 CFR 63.118(h)]

#### RLP037 41-91, EO Eff Pretreat Fd Tk Scrub Vent C-EO620

- 733 Equipment/operational data recordkeeping by electronic or hard copy as needed. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request. [LAC 33:II,2115.K]
- 734 Flow rate monitored by flow rate monitoring device once every four hours. [LAC 33:II,501.C.6]  
Which Months: All Year Statistical Basis: None specified
- 735 Flow rate recordkeeping by electronic or hard copy once every four hours. [LAC 33:II,501.C.6]

## SPECIFIC REQUIREMENTS

AI ID: 1136 - Shell Chemical Co - Geismar Plant  
Activity Number: PER20050033

Permit Number: 2057-V3

Air - Title V Regular Permit Renewal

### RLP037\_ 41-91, EO Eff Pretreat Fd Tk Scrub Vent C-EO620

736 Submit report Due annually, by the 31st of March for the preceding calendar year. List the hours that the scrubber operated out of the ranges specified. Submit report to the Office of Environmental Compliance, Enforcement Division. [LAC 33:III.501.C.6]

737 Flow rate >= 1 gallons/min. [LAC 33:III.501.C.6]

Which Months: All Year Statistical Basis: None specified

738 A water scrubber, E-EO620, with water flow indicator and a 98% efficiency is considered as MACT. [LAC 33:III.5109.A]

### RLP039\_ 64-86, EO2 700 Vent

739 Equipment/operational data recordkeeping by electronic or hard copy as needed. Maintain records to demonstrate that the criteria are being met for any exemption claimed. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request. [LAC 33:III.2115.K]

740 Flow rate monitored by flow rate monitoring device once every four hours. [LAC 33:III.501.C.6]

Which Months: All Year Statistical Basis: None specified

741 Flow rate recordkeeping by electronic or hard copy once every four hours. [LAC 33:III.501.C.6]

742 Submit report Due annually, by the 31st of March for the preceding calendar year. List the hours that the scrubber operated out of the ranges specified. Submit report to the Office of Environmental Compliance, Enforcement Division. [LAC 33:III.501.C.6]

743 Flow rate >= 9000 lb/hr of Lean Absorbent. [LAC 33:III.501.C.6]

Which Months: All Year Statistical Basis: None specified

744 Permittee shall comply with all the applicable requirements of 40 CFR 63 Subpart G for Group I under the storage vessel provision. Controlled by an absorber having a 99% efficiency. Considered as MACT. [LAC 33:III.5109.A]

745 Permittee shall comply with all the applicable requirements of 40 CFR 63.119(e). Absorber efficiency shall be maintained at 95%. [40 CFR 63.119(e)]

### RLP041\_ 97-00, EO-2 Oxidizer Vent

746 Permittee shall comply with all the applicable requirements of 40 CFR 63 Subpart G for Group I vent. Considered as MACT under LAC 33:III.5109. [LAC 33:III.5109.A, LAC 33:III.5107.B]

747 Permittee shall comply with all the applicable requirements of 40 CFR 63.113(a)(2). [40 CFR 63.113(a)(2)]

748 Shall maintain a minimum temperature of 1450 degrees F with a residence time of 1.0 second to ensure 98% efficiency. Temperature monitored by continuous recorder continuously. [40 CFR 63.114(a)(1)(i)]

Which Months: All Year Statistical Basis: Constant